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ABSTRACT

Presented in this report are selected findings of the Income Verification Pilot Project (IVPP), an investigation examining misreporting of applicant income and family size on applications for government-sponsored school meal benefits. As reported here, Phase II of the project provided for a comprehensive assessment of specific quality assurance procedures in a national sample of school districts during the 1982-83 school year. Participating were 16 states and a sample of 114 school districts: 29 experimental sites where seven quality assurance procedures were tested and 85 control sites. After the first chapter's brief introduction, chapter 2 explains the various quality assurance procedures examined. Chapters 3 and 4 describe the research design and data collection procedures. Chapter 5 presents findings concerning the feasibility and effects of free and reduced-price school meal applications that were developed specifically for use in the IVPP. Findings on feasibility and effects of requiring income documentation with the free and reduced-price school meal applications are reported in chapter 6. Chapter 7 presents findings on the feasibility and effects of quality assurance procedures used after school meal applications are processed. Finally, results and conclusions of the pilot project are summarized in chapter 8. Appendices include the IVPP application for free and reduced-price school meals, a summary of experimental school districts' characteristics, a measurement of quality assurance procedure costs, and a nonresponse analysis. (RH)

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# INCOME VERIFICATION PILOT PROJECT

## PHASE II

## RESULTS OF QUALITY ASSURANCE EVALUATION 1982-83 SCHOOL YEAR

April, 1984

Submitted to:

Office of Analysis and Evaluation
Food and Nutrition Service
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Submitted by:

Applied Management Sciences, Inc.
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PS 014397

SENIOR PROJECT STAFF

JoAnn Kuchak, Director
Joseph Casey, Deputy Project Director
Daniel Finnegan, Principal Investigator
Alan Cohen, Systems Analyst
Carol Wolinsky, Senior Analyst

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Thomas Cook, Professor, Northwestern University
Warren Gower, Chief, Medicaid Fraud Unit of State's Attorney Office (Connecticut)
Richard Jaeger, Professor, University of North Carolina
Jack Leavy, Southwest Regional Inspector General for Audits, Office of the Inspector General, USDA
Susan Ossman, Deputy Director, Division of AFDC Quality Control, U.S. Department of Health and Human Services
Vivian Pilant, Director, Office of School Food Services, South Carolina Department of Education
Rudolph Schwartz, Chief Mathematical Statistician, Office of Research and Statistics, Social Security Administration
Joseph Steinberg, President, Survey Design, Inc.

The Advisory Panel represented the perspectives of schools, state agencies, research methods, and other Federal benefit programs and played a key role in balancing and focusing the diverse issues that emerged as the study progressed.

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Most importantly, we acknowledge the study participants, who over the past two years included State School Food Service Directors in 22 states, the staff from 126 school districts throughout the nation, and more than 2,800 households participating in the school meal programs. We thank these participants for voluntarily providing the time and resources required of participation and willingly sharing their impressions of the quality assurance procedures that were tested.

JoAnn Kuchak
Vice President

## EXECUTIVE SUMMARY

### Pilot Study Background

This summary presents conclusions from a Congressionally-mandated pilot study of procedures designed to reduce fraud and abuse in the federally-supported school meal programs. It focuses on the results of a national test of seven quality assurance procedures designed to prevent and detect misreporting on free and reduced-price school meal applications.

Prior studies, including one conducted in 1981 by the U.S. Department of Agriculture's (USDA) Office of the Inspector General, have estimated that approximately one of every four recipients of free and reduced-price school meals was receiving benefits he was not entitled to receive. During the 1981-82 school year, in a small sample of school districts, the Department tested simple methods to deter applicant misreporting and reduce the error rate. These methods included a slight modification to the free and reduced-price meal application then in use, providing information about income that should be reported on the application, and issuing a warning that the applications might be verified. Although the sample of school districts was not nationally representative, these simple procedures reduced the error rate to 17.4 percent.

During the 1982-83 school year, the Department implemented a large- scale, nationally representative test of seven quality assurance procedures. These quality assurance procedures were designed (1) to reduce the error rate by deterring household misreporting on the application, and (2) to enable school districts to verify information on the application and, thereby, ensure that program participants appropriately receive the meals to which they were entitled. The major objectives of this large-scale test, known as Phase II of the Income Verification Pilot Project (IVPP), were to:

- determine the capability of the quality assurance procedures to reduce error rates by deterring and detecting applicant misreporting;
- determine if it was feasible for school districts to conduct the quality assurance procedures;
- measure the costs to perform and savings that result from each quality assurance procedure; and

- examine the barrier effects, if any, of the procedures on program participants and their families. Barriers are the obstacles posed by the procedures that result in eligible households not receiving benefits.

Quality Assurance Procedures

The seven quality assurance procedures implemented in this pilot study were:

I. A Revised Application Form designed to deter misreporting and to provide data needed to support the legal and informational requirements of subsequent verification procedures. (The application is referred to as the IVPP application.)

II. Documentation with the IVPP Application to support information about earned income or other benefit program eligibility (e.g., food stamps) reported on the application. It should be noted that this procedure involved only submitting the documents, not cross-checking them with the application, and as such was intended to deter misreporting.

Both these procedures were implemented at the start of the school year when meal applications are submitted and reviewed for eligibility. Thus they are primarily deterrence procedures. In most school districts, these two procedures were tested by school building personnel (e.g., principals and school secretaries) and involved all students.

Five additional quality assurance procedures were implemented later in the school year after applications had been approved. Thus they were primarily detection procedures. The procedures were:

III. Document Consistency Check following approval for benefits to determine if the document initially submitted with the application corroborated information on the application.

IV. Documentation After Application with Consistency Check to obtain documentary proof of income and other benefit program eligibility reported on the application. (This procedure is also referred to as follow-up documentation request.)

V. Parent Telephone Conference following approval of benefits to re-obtain all application items in order to verify income and family size information originally reported on the application.

VI. Local Third-Party Checks (e.g., welfare office data exchange) following approval of benefits to verify earned income or income maintenance program eligibility information.

VII. State Third-Party Checks (i.e., computer wage tape match) following approval of benefits to verify earned income or income maintenance program eligibility information.

Document consistency check, documentation after application with consistency check (or follow-up documentation), and parent telephone conference were primarily conducted by school building officials. Local third-party checks were conducted by

district personnel and state third-party checks were conducted by the evaluation contractor. All five of these procedures, in contrast to the first two procedures, were tested on a sample of students in each school.

## Methodology

The implementation and evaluation of the quality assurance procedures were accomplished using an experimental design. According to this design, control school districts were matched to experimental districts. The seven quality assurance procedures were then randomly assigned to schools within each experimental district. A total of 16 states--8 experimental and 8 control--and a nationally representative sample of 114 school districts participated in the pilot project: 29 experimental sites where the seven quality assurance procedures were tested and 85 control sites. Overall, the experimental sites consisted of a total of 755 school buildings with a total enrollment of over 379,400 students. Over 78,600 IVPP applications were processed, of which 35 percent included a document with the application. Ten percent of the applicants in the experimental sites were subjected to one form of verification performed at the school level--parent telephone conference, follow-up documentation request with consistency check, or document consistency check--and either local or state third-party check of eligibility for income maintenance benefits or earned income.

The procedures were evaluated on the basis of data from IVPP applications and non-IVPP applications, detailed outcome reports completed by the school officials who actually conducted the procedures, questionnaires completed by school and district personnel, and in-home audits with a random sample of 1,810 applicants in 15 experimental sites. Also, questionnaires were completed by each of the matched control school districts. The resulting data were analyzed, and the results are summarized below.

## Study Conclusions

- Revised Application Is an Effective Deterrent to Misreporting. The revised pilot study application results in a sharply reduced error rate of 11.7 percent. Within this percentage, the most serious category of misreporting (i.e., applicants receiving benefits who are ineligible for free meals) drops to 1/2 of 1 percent as a result of the new application. Further reductions in this error category seem unlikely. The revised pilot study application does not present a discoverable barrier to participation for eligible households.
- Revised Application Results in Low Dollar Error Loss. When the 11.7 percent error rate is translated into error costs (i.e., the percentage of dollars lost to misreporting as a function of total program expenditures) the dollar error rate is low -- approximately 5 percent.

- Revised Application Is Needed. Without state-wide adoption of a revised application or its essential components, there is continuing evidence of a substantial number of participants receiving excess benefits (i.e., about a 23 percent case error rate).

- Sustained Effectiveness of Deterrence Unknown. It is assumed that the explicit threat of adverse action is in part responsible for the deterrent effect of the revised application. However, because the pilot study was of limited duration, it is not now possible to judge empirically the sustained effectiveness of the application over time. Study findings do not offer guidance on how widespread or intense income verification detection procedures need to be in order to sustain the deterrent effect of the application over time.

- Documentation with Application Ineffective. Requiring income or food stamp eligibility documentation with applications did not produce a significant reduction in error. Moreover, this procedure resulted in barriers to participation for eligible households.

- Problems Encountered Implementing Detection Procedures. In pilot sites, even with extensive contractor training and technical assistance, school districts failed to follow through with full implementation of several detection procedures. Such compliance problems may be encountered under normal operating conditions. Study findings suggest that this is partly due to the complexity of the verification procedures, requisite followup activities, and built-in administrative disincentives to cooperate.

- Detection Procedures Not Cost-Effective. None of the income verification detection procedures save more money then they cost. Moreover, these costs accrue almost exclusively to school districts and not to states or to the federal government. The high local costs to conduct verification are due in large part to the fact that higher paid school personnel (e.g., principals) typically conduct verification. In contrast to the revised application, the detection procedures, in general, present high barrier to participation for eligible households.

- Use of Error-Prone Model Makes Some Detection Procedures Mure Effective. Targeting applications for verification using the error-prone model is more effective in locating errors than random selection. The most effective detection procedures were parent conferences and state-wage matches using the error-prone model. However, even when using the error-prone model, parent conferences were not cost-effective, at least in the short run. The study did not produce measures of the cost-effectiveness of state wage matches.

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# 1

# INTRODUCTION

In response to concerns about income misreporting and subsequent excess benefits in U.S. Department of Agriculture's (USDA) free and reduced-price school meal programs, Congress mandated provisions in Public Law 97-35 to improve meal application procedures. This law specified a number of changes in the application, including the requirement that Social Security numbers be reported for all adult members of applying households and that only reduced-price guidelines[1/] be distributed to applicants. U.S. Department of Agriculture was empowered to require applicants to provide proof of eligibility and to require School Food Authorities (SFAs) to verify eligibility. In addition, the Secretary of Agriculture was authorized to conduct a pilot study to verify data on sample applications. USDA initiated the Income Verification Pilot Project (IVPP) in response to that authorization.

## 1.1 INCOME VERIFICATION PILOT PROJECT

The Income Verification Pilot Project developed and tested a variety of quality assurance procedures to prevent and detect the misreporting of income and family size information on the school meal application.[2/] The following major research issues were addressed:

- determine the capability of the quality assurance procedures to reduce error rates by deterring and detecting applicant misreporting;
- determine if it was feasible for school districts to conduct the quality assurance procedures;
- measure the costs to perform and savings that result from each quality assurance procedure; and,

- examine the barrier effects, if any, of the procedures on program participants and their families.

The pilot project was conducted during school years 1981-82 (Phase I) and 1982-83 (Phase II). Phase I involved a geographically limited sample of 13 school districts and assessed the effectiveness of a revised meal benefit application as well as additional explanatory information to reduce applicant misreporting and error. In contrast, Phase II was a large-scale test involving a total of 120 experimental and control school districts throughout the country. In this phase, a scientific experimental design was used to test the effectiveness of a redesigned school meal benefit application and six other quality assurance procedures designed to deter and detect error in reporting income and household size.

## 1.2 THIS AND OTHER REPORTS OF THE PROJECT'S FINDINGS

This is the fourth report from the Income Verification Pilot Project (IVPP). Earlier reports examined specific issues relating to legislative effects and misreporting based largely on data collected in the 1981-82 school year (Phase I).[3/] This report presents the results of a comprehensive assessment of specific quality assurance procedures tested in a national sample of school districts in the 1982-83 school year (Phase II).

Although the pilot study procedures resemble income verification procedures recommended in interim regulations by USDA, the pilot project began before the regulations were implemented.[4/] While this report is not intended to provide an assessment of the USDA's recommended procedures, the findings reported here do provide information about the potential impact of some of USDA's interim verification regulations.

The remainder of this report presents major findings from Phase II of the pilot project. Chapter 2 explains the various quality assurance procedures tested, and Chapters 3 and 4 present research design and data collection. Chapter 5 presents the findings on the feasibility and effects of the free and reduced-price school meal application developed specifically for use in the IVPP project. Findings on the feasibility and effects of requiring income documentation with the free and reduced-price school meal application are reported in Chapter 6. Chapter 7 presents the findings on the feasibility and effects of quality assurance procedures that take place <u>after</u> school meal applications are processed. The results and conclusions of the pilot project are summarized in Chapter 8.

## END NOTES

1/ Previously both free and reduced price guidelines were distributed.

2/ Seven quality assurance procedures were tested by the IVPP. Chapter 2 describes each procedure in detail.

3/ Earlier reports include:

Income Verification Pilot Project: Findings on School Meal Participation and Legislative Impact, 1981-82 School Year. Applied Management Sciences, Silver Spring, MD. December 1982.

Income Verification Pilot Project: School Year 1981-82 In-Home Audit Findings. Applied Management Sciences, Silver Spring, MD. April 1983

Income Verification Pilot Project: Development of an Error-Prone Model for School Meal Programs. Applied Management Sciences, Silver Spring, MD. August 1983.

4/ 7 CFR, Part 245.

# 2

## THE QUALITY ASSURANCE PROCEDURES

The effectiveness of a redesigned meal benefit application and six different quality assurance procedures was tested by the Income Verification Pilot Project (IVPP). Most school districts selected to participate as sites in the study tested all procedures. In accordance with the experimental design, however, different schools in each school district implemented and tested different combinations of procedures. No school tested more than three procedures, and in some instances they tested only one or two. This chapter describes each quality assurance procedure, the rationale for including it in the national experiment, and how it was expected to operate.1/

### 2.1 BACKGROUND AND DEVELOPMENT

Quality assurance procedures are implemented to prevent and to detect errors that result in the inappropriate expenditure of funds. Quality assurance procedures are used to prevent and detect misreporting by applicants and errors caused by administrative agencies. IVPP focused only on the prevention and detection of misreporting by applicants, and did not examine administrative errors. Many federal agencies responsible for benefit programs, including Aid to Families with Dependent Children (AFDC), Food Stamps, Supplemental Social Security, and Student Financial Aid, use a variety of quality assurance procedures to reduce fraud and abuse by beneficiaries. Quality assurance in these programs is designed to assure that benefit awards are made on the basis of correct information. Other agencies such as the Internal Revenue Service use similar procedures to ensure that the government collects the tax revenues each citizen is required to pay.

Unlike these programs, the USDA free and reduced-price school meal programs have only recently begun to address the problem of income misreporting and excess benefits. There are a number of reasons for this:

- Low Benefit Amount. The school meal programs have a relatively low per-student dollar benefit rate--approximately $200 per student annually, which is approximately 10 percent of the average annual AFDC payment (federal and state funds) for one child. Efforts to reduce misreporting are cost-effective only if the amount saved through prevention and detection of misreporting is great enough to offset the additional costs associated with quality assurance.

- Historical Reliance on Self Certification by Applicant. Traditionally, the school meal programs have been permitted to accept self-reported, unverified information about household size and income and have based eligibility determination on these reports. Also, prior to the 1981 passage of Public Law 97-35, school districts were only permitted to verify applications on a 'for cause' basis. In contrast, many other federal assistance programs require applicants to submit documents that verify household income reported on the benefit application. Because school districts are accustomed to a relatively simple application process, the implementation of quality assurance in the form of verification requirements may initially meet resistance from both parents and school district officials.

- Lack of Specialized Personnel. Applications for meal benefits are processed by SFA or other school officials who have many other responsibilities and limited time to devote to the eligibility determination process. Implementing quality assurance requirements would place an additional burden on these personnel. In contrast, other federal assistance programs have specially trained staff to process applications and conduct quality assurance procedures.

- Absence of Federal Funds Earmarked for Quality Assurance. School food authorities do not receive any direct federal funding to conduct eligibility determination and quality assurance efforts.2/ Other federal programs provide funding and other incentives to support quality assurance. Quality assurance may introduce additional staff requirements that are not currently funded, thus inhibiting the ability of school districts to comply effectively with verification requirements.

- Limited Time for Application Processing. Families are required to reapply annually for meal benefits. Because schools traditionally complete administrative paperwork at the beginning of the school year, virtually all meal applications are processed before October of each school year. In other federal assistance programs, eligibility determination and verification occur routinely throughout the year.

To identify quality assurance procedures that might be appropriate to the school meal programs application process, two activities were undertaken. First, quality assurance techniques already used in other federally-supported benefit and assistance programs were examined. Second, quality assurance procedures that have been previously initiated by very few school districts were examined. The research identified 24 federally-funded programs that had implemented quality assurance procedures as part of either eligibility determination or a quality control process. Four major categories of quality assurance were used by these programs:

- Income Documentation. Written or verbal information was used to confirm applicant's earned and/or unearned income. In virtually all cases, the original source of the document obtained by the applicant or recipient was another agency or individual (e.g., employer).
- Piggybacking on Another Program's Verification or Eligibility Determination Process. Income amounts previously verified by another program or certified eligibility to receive that program's benefits are sought. It is also possible to request the program to verify application information as part of its quality assurance procedures.
- Computer File Matching. Income and household size information on the application was compared to information in the computer files of other assistance programs to confirm eligibility or identify discrepancies.
- Error-Prone Profiling. Results of a statistical analysis that provides a profile of applications most likely to be in error were used. This statistical profile was then used to identify applications with a high likelihood of error for verification.

Typical methods used in school districts that had adopted income verification prior to IVPP included: (1) requests for documentation from all applicants when meal benefit applications were submitted, (2) verification after the application was approved on a random sample of applications through telephone conferences with parents, or (3) contacts with employers or public assistance agencies to confirm the income of a sample of applications.

Knowledge of quality assurance procedures used by other agencies provided the basis for specifying a range of potential procedures to deter or detect applicant misreporting. However, many of these procedures are very complex and difficult to implement without a significant experience base. In selecting the specific procedures for testing in the pilot project, consideration was given to school operating characteristics noted earlier and compatibility with the timing of application-related activities in the school meal programs. For example, virtually all households apply for free and reduced-price meal benefits at the start of each school year.[3/] School or SFA officials determine eligibility based on the

application. Quality assurance, when it is performed, usually occurs after eligibility has been determined and benefits have been awarded. This sequence of activities is followed to avoid delays in providing meal benefits at the start of the school year when the bulk of applications are received and processed. Thus it was necessary to select and modify existing quality assurance procedures to increase their potential for use by school districts. For example, many benefit programs require that applicants provide documentation of all income. Obtaining and reviewing these documents is very labor intensive. To accommodate the characteristics of school districts, this requirement was modified for IVPP to include only documentation of the primary source of household income. Similar simplifications and adjustments were made in all of the quality assurance procedures tested in IVPP.

Ultimately, a meal application form designed specifically for the IVPP and six quality assurance procedures were designed for testing. The seven quality assurance procedures are listed below and summarized in Exhibit 2.1.

I. A Redesigned Application Form (IVPP Application). This procedure was designed to deter misreporting and to provide data needed to support the legal and information requirements of subsequent verification activities.

II. Documentation with the IVPP Application. This procedure was designed to deter misreporting by requiring information about earned income or other benefit program eligibility (e.g., food stamps). This procedure involved only submitting the document(s) with the application, not cross-checking information on the document with corresponding information on the application.

III. Document Consistency Check. This procedure was performed on a sample basis to detect error only for applicants who were required to complete Quality Assurance Procedure II. It took place following approval for benefits to determine if the document(s) submitted with the application corroborated information on the application.

IV. Documentation After Application with Consistency Check. This procedure was also performed to detect error and used a sample of applicants who did not undergo Quality Assurance Procedure I. The sampled household was required to provide documentary proof to corroborate information on the application after the application was approved.

V. Parent Telephone Conference. This procedure was performed on a sample basis to detect error following approval for benefits. It was designed to verify income and family size information on the application by re-eliciting this information from the applicant.

VI. Local Third-Party Contact (Interagency Data Exchange). Following approval for benefits, the income maintenance program eligibility or earned income of a sample of applicants was verified to detect error.

VII. State Third-Party Contact (Interagency Tape Match). Following approval for benefits, the earned income or income maintenance program eligibility of a sample of applicants was also verified to detect error.

EXHIBIT 2.1: SUMMARY OF CHARACTERISTICS OF THE QUALITY ASSURANCE PROCEDURES

| QUALITY ASSURANCE PROCEDURES | CHARACTERISTICS | | | | | |
|---|---|---|---|---|---|---|
| | PRIMARY PURPOSE | TIMING | NUMBER OF BENEFICIARIES AFFECTED | UNIT RESPONSIBLE FOR PROCEDURES | BURDEN FOR APPLICANT | BURDEN FOR SCHOOL PERSONNEL |
| I - IVPP Application | Deterrence[1] | At the time of application | All applicants | School/SFA | Short term/ high intensity | Short term/ high intensity |
| II - Documentation with IVPP Application | Deterrence | At the time of application | All applicants[2] | School/SFA | Short term/ high intensity | Short term/ high intensity |
| III - Document Consistency Check | Detection | After approval | 10% of beneficiaries[2] | School/SFA | Short term/ low intensity | Long term/ low intensity |
| IV - Documentation After Application with Consistency Check | Detection | After approval | 10% of beneficiaries[2] | School/SFA | Short term/ high intensity | Long term/ high intensity |
| V - Parent Telephone Conference | Detection | After approval | 10% of beneficiaries[2] | School/SFA | Short term/ low intensity | Long term/ low intensity |
| VI - Local Third-Party Contact | Detection | After approval | 10% of beneficiaries[2] | School/SFA | Short term/ low intensity | Short term/ high intensity |
| VII - State Third-Party Contact | Detection | After approval | 10% of beneficiaries[2] | School/Contractor | Not applicable | Not applicable |

[1]/The IVPP application was also designed to facilitate verification.

[2]/Procedures were assigned to schools in the pilot school districts in accordance with an experimental design.

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The first and second procedures were implemented during the application process: applicants were required to comply with the procedure or the meal application would not be approved. The remaining procedures were implemented by school officials later in the school year. Each procedure was designed so it could be implemented by staff from either the school building or school district. The choice was left to the individual school districts participating in the pilot project to minimize disruption of their administrative structures caused by implementation of the procedures.

## 2.2 DESCRIPTION OF QUALITY ASSURANCE PROCEDURES

The rationale for each of the seven procedures and a description of how each was intended to operate in the IVPP are presented below.

### 2.2.1 Quality Assurance Procedure I: Redesigned Application Form

To deter misreporting and to support the analytic needs of the pilot project, a completely revised meal benefit application was developed. This application is referred to as the IVPP application in the remainder of the report, and a facsimile copy is provided in Appendix A. The application was designed to enhance reporting accuracy and to provide necessary information and authorization for other quality assurance procedures. It should be noted that there is no standard application form for school meal benefits that all school districts must use. The Food and Nutrition Service of USDA issues regulations concerning the items that must be included on the application, and develops a model application form and accompanying model parent letters. States and districts then use these model applications and parent letters as the basis for their own forms.

The form incorporated features to reduce specific types of misreporting revealed in analyses of reporting errors, using Phase I applicant audit data. The redesigned IVPP application varied from the application form recommended by FNS for the 1982-83 school year (and used by most school districts) in the following ways:

- Income Detail. It requested applicants to list all sources of income separately for each adult member of the household. The income reporting section was expanded because the analysis of Phase I applicant audit data revealed that failure to report wages from all jobs and for all adults was a common source of misreporting that led to the award of excess benefits.

- Verification Waiver. Under provisions of state and federal privacy legislation, state and local agencies may not release information without specific permission from the involved individual. Therefore a waiver was required for each adult whose income and/or eligibility for an income maintenance program would be verified through collateral contact. Furthermore, requesting each adult to sign the waiver was expected to be a deterrent because applicants would clearly understand that the accuracy of the information they supplied was subject to verification.
- Description of Legal Basis for Information Requirements. The IVPP application provided a complete description of applicable provisions of the Privacy Act, the legislative basis for requiring the information sought on the application, and the consequences for not providing required/requested information. (In addition, it provided guidance for calculating monthly income.)

The pilot project tested several features of the revised application: (1) its ability to discourage (deter) misreporting; (2) its administrative feasibility; and (3) its effects, if any, on discouraging (barring) eligible individuals from applying for benefits. Another purpose of the pilot project was to obtain information needed to support subsequent verification activities.

School districts that used the IVPP application received English and Spanish language versions.[4] Districts were instructed to follow their usual procedures for distributing the revised applications. Consequently, in some districts, distribution and processing of applications was handled at the district level; in other districts, school building personnel performed these tasks.

Processing required reviewers to determine both the completeness of the application and whether the household was eligible for school meal benefits. A complete application was defined as one that included the signature of an adult household member, the Social Security numbers for all adult household members,[5] and information about household income and size for the complete month prior to completion of the application.[6] If any of these four items was missing, the application was considered incomplete. Incomplete applications were returned to parents with a form explaining what additional information was required. Eligibility was not determined until a complete application was received. If the household did not resubmit the application, a meal benefit determination was not made.

### 2.2.2 Quality Assurance Procedure II: Documentation at the Time of Application 7/

In this procedure, applicants were required to enclose with the completed application a document that verified the primary source of income for each adult in the household for the month prior to the submission of the agency's application. This time period was selected because it coincided with the agency's definition of current income used to determine eligibility. To comply with the requirement, applicants could provide a document confirming eligibility for food stamps. Adults with wage income were given the option of documenting their wages. Adults who had no wages were asked to document income maintenance benefits (e.g., AFDC) or other primary sources of income. See Appendix A for a copy of instructions regarding documentation for applicants. The focus on documenting wages was a result of the Phase I data, which indicated that earned income was the major source of misreporting and thereby contributed to the improper award of meal benefits.

School or SFA personnel were instructed not to process the application unless appropriate income documentation for each adult was submitted. Where documentary support was missing, applications were returned to the household with an explanation of what types of supporting documentation would be acceptable. This procedure had the potential to delay eligibility determination. Once the application and supporting documentation were received, school officials were instructed to determine eligibility based solely on the information contained in the application. They were instructed not to compare income information on the application to the documentation but rather to check the documentation only to ensure that it covered the proper date, the proper individual(s), and acceptable evidence. This check could be performed quickly and did not require extensive review, recomputation, or follow-up.

The procedure involving documentation at the time of application was tested because it placed the burden of proof on the applicant rather than the school district and because it could be verified at the time of application. This procedure resembled those used by other benefit programs that apply a "means test" to determine eligibility. It did not require school districts to develop sophisticated data or administrative systems because the applicant provided the document. It was a compromise between requesting and thoroughly reviewing documentation at the time of application and requesting documentation only after the application had been approved. The procedure was expected to both deter fraudulent behavior and permit subsequent detection of misreporting.

Quality Assurance Procedures I and II were conducted as an integral part of the application process. The five remaining procedures were conducted after eligibility for meal benefits had been determined and involved only a sample of approved applications.

### 2.2.3 Quality Assurance Procedure III: Document Consistency Check

Under this procedure, the determining official compared the income amount indicated on the application with the corresponding amount(s) indicated on the document(s) accompanying the application. Alternatively, recipients could have confirmed their eligiblity based on a proxy for need such as evidence of eligibility for food stamps. Where the documentation disagreed with information on the application, officials recalculated eligibility using the information from the documentation. If the discrepency was large enough to affect eligibility status, households were notified by mail and asked to explain the difference. If the applicant failed to respond or was unable to explain adequately the difference, benefits were changed to reflect eligibility status based on the document(s). The procedure was conducted using a sample of applicants who submitted documents with the applications.

The document consistency check is a verification procedure intended to detect errors reported on the application. This procedure was tested because it was considered a practical and relatively simple method by which school personnel could validate applicant-provided information for a sample of households. The document consistency check was performed after applicants were approved to avoid potential delays in the annual eligibility determination period set forth in program regulations.

### 2.2.4 Quality Assurance Procedure IV: Documentation After Application with Consistency Check

In contrast to requesting documentation with the application (Procedure II), this procedure was implemented after an application for school meals had been completed and approved. A random sample of approved applicants was contacted in writing by the determining officials and required to submit documentary evidence of what their income was for the month prior to application. Recipients were given a list of acceptable forms of documentation. This list was similar to the list of documents used in Quality Assurance Procedure II. Adult household members with wage income were required to document their earnings. Those with no wage income were required to document income maintenance benefits such as AFDC or food stamps (if any) or other primary sources of income.

Upon receiving documentation, school or SFA officials reviewed the materials as in Quality Assurance Procedure III to be certain that information for all adults with reported income was included, that documents covered the month prior to application, and that the documents were acceptable forms of evidence. If the documentation was incomplete, recipients were notified by mail and told what additional information was needed. If the recipient failed to respond, meal benefits were terminated. If documentation was not consistent with the information on the application, officials recalculated eligibility using information on the documentation. If the discrepancy was large enough to affect eligibility, the household was contacted and asked to explain the difference. If the household did not respond or could not adequately explain the discrepancy, eligibility status was altered based on the new household income indicated by the documents.

Documentation after application with consistency check was tested because it was a method of detecting error. The procedure placed the burden of proof on the applicant and did not require computers to confirm the accuracy of applicant-provided information. Because the request for documentation was made after the application had been approved, it did not delay the receipt of meal benefits.

Like documentation with application, the procedure tested whether households maintained records and whether employers and income maintenance offices were willing to supply records to the households. This procedure differed from documentation with application in that it tested whether recipients would cooperate with a quality assurance procedure implemented after benefits began. Finally, the procedure provided an error detection and correction capability by identifying cases of misreporting.

### 2.2.5 Quality Assurance Procedure V: Parent Telephone Conference

This procedure was also implemented after applications were reviewed and approved. School district officials contacted a random sample of approved households by telephone to determine household size and income in the month prior to submitting the application. The information obtained over the telephone was compared to that on the application. Where discrepancies were found, eligibility was recomputed based on the corrected information. Households were then asked to explain the difference. If no acceptable explanation was offered, eligibility status was changed on the basis of revised household income or household size. Parents

were notified in writing of the correction and its effect on eligibility. If households could not be contacted by telephone, a letter was sent instructing the parent to contact the school official.

Parent telephone conferences were a detection procedure designed to identify intentional or unintentional errors in reporting household size or income. The procedure was tested because it was a low-cost, low-burden method of verifying information on the application.

### 2.2.6 Quality Assurance Procedure VI: Local Third-Party Contact

Local third-party contact is an information exchange between the school or SFA and the local Food Stamp and/or Public Assistance office. For a sample of meal recipients, the local social services office was asked to indicate whether each recipient in the sample had received benefits (and the amount of the benefit in instances where AFDC was verified) for the month prior to submitting the application.[8/] School officials compared this information with application data. If discrepancies affecting eligibility were found, parents were notified. Where the discrepancy could not be explained, eligibility status was redetermined based on the third-party information, and benefits were adjusted accordingly.

This procedure was designed to detect misreporting without the direct involvement of the household. This procedure was selected for testing because it relied on an independent source of information and eliminated the opportunity for applicants to alter documents. Further, a relatively low requirement of school personnel time was expected. Finally, the procedure required contact with the recipient only when the third-party provided information that disagreed with information on the application.

Phase I of the Income Verification Pilot Project indicated that households who receive public assistance or food stamps typically have incomes low enough to qualify for free school meals; therefore, this procedure was not expected to identify many households ineligible for benefits. However, USDA's Office of the Inspector General recommended testing the feasibility of local third-party data exchanges as a method of verifying application information. Further, knowing how many households received benefits (i.e., food stamps) they did not report on the application was seen as useful for designing future application procedures and instructions. The total household income was not verified by these agencies because of differences in the way income and household are defined by the school meal programs, food stamps, and AFDC.[9/]

### 2.2.7 Quality Assurance Procedure VII: State Third-Party Contacts

The seventh and last procedure was implemented in states with statewide computerized wage, food stamp, and/or public assistance information systems and the capability for computerized data exchanges. The names and Social Security numbers of a sample of household members who signed a waiver permitting collateral contact were forwarded to the appropriate state agencies.10/ State employment security offices provided information about wage income for the quarter including the application month for each listed adult household member. Public assistance agencies reported receipt of public assistance and the dollar value for the month prior to application. Food stamp offices confirmed receipt of benefits for the month prior to application.

Information was returned to the pilot project evaluation contractor who identified cases with discrepancies between the information on the data tape and the application. Where discrepancies were found, eligibility was recomputed based on the data tape information to determine if eligibility status would be affected. Because definitions of total household income differ by program and because this was only a test of the feasibility of automated, state-level tape matching, results were not shared with the schools or SFAs. Meal benefits were not corrected as a result of the findings from the state-level collateral contacts. Rather, the results were used analytically to investigate the error detection capability of the procedure, and not the feasibility or costs.11/

Tape matching has been used to verify income information in a variety of federal assistance programs, including Student Financial Aid, AFDC, Food Stamps, and Housing Assistance. The procedure was specifically suggested for examination by Office of Management and Budget and USDA's Office of the Inspector General as a potentially effective method to detect misreporting in the school meal programs. It was tested as part of IVPP because the method was expected to be a very accurate way to detect unreported and underreported income. The procedure relied on an independent source of information and did not present the verified household with the opportunity to alter or withhold evidence. In addition, the procedure was expected to reduce the burden on school officials and third-party agencies by centralizing communications and automating the matching process.

## 2.3 IMPLEMENTATION OF THE QUALITY ASSURANCE PROCEDURES

The IVVP evaluation contractor provided technical support to school districts for all Phase II procedures. The contractor supplied copies of the IVPP application and model letters that could be reproduced and sent to households explaining application requirements, used to train SFA and school officials in the pilot procedures for processing applications and verifying information, and used to assist all processing and verification tasks. In addition, to assure random selection of recipients and conformity with the sampling and experimental designs, the evaluation staff drew samples or controlled selections for all verification activities.

It should also be noted that the participating experimental school districts were instructed to apply appropriate sanctions when applicants failed to comply with application or quality assurance requirements and when verification revealed the award of excess benefit. Applicant failure to comply resulted in termination of all meal benefits.[12/] Finally, if verification revealed excess benefits, benefits were adjusted to the appropriate level, i.e., reduced or full price. In all instances, applicants and recipients were permitted to file a formal appeal with the school district in accordance with regulations set forth in 7 CFR 245.

## END NOTES

1/ Chapter 3 explains the study design and how school districts and individual schools were assigned to experimental groups for the purpose of testing the procedures.

2/ State agencies responsible for program administration do receive State Administrative Expense (SAE) funds and are allowed to use these funds for quality assurance, if done at the State level.

3/ Applications from families enrolling children later in the school year are processed when the children are enrolled.

4/ Applications were also translated into Vietnamese and two Chinese dialects.

5/ Adults were defined as persons 21 years of age or older.

6/ Program regulations require the use of current income to determine eligibility, which is defined as the most recent complete month prior to the month the application is submitted.

7/ Documentation of income as used in this report refers to an official document prepared by the income or benefit source (e.g., employer or social services agency). This use differs from 7 CFR 245, which uses the term documentation to refer to minimum reporting requirements for an application to be considered complete.

8/ In most instances the food stamp and AFDC programs were administered by the same local agency.

9/ The school meal programs only consider income that could be used to pay for meals while other programs also consider the value of savings accounts and assets such as property.

10/ This waiver was incorporated in the IVPP application.

11/ All other procedures were evaluated in terms of effectiveness, feasibility, and costs.

12/ Except for Procedure VII, State third-party contacts, which was conducted by the evaluation contractor, not the school districts.

# 3

## RESEARCH DESIGN

The design used to test the seven quality assurance procedures had two primary components: a sample design for selecting a national sample of school districts through which the quality assurance procedures would be tested and an experimental design for testing the procedures within the selected school districts.

### 3.1 SAMPLE DESIGN

A four-step sample design was used to select a national sample of school districts included in the experiment.

#### 3.1.1 Step 1 - Selection of States

Fourteen states were initially sampled--seven experimental states and seven matched control states. The states were sampled in matched pairs on the basis of a lattice sampling design that ensured representativeness in terms of state population and geographic region. Because state governments have regulatory responsibility for local school districts, state government cooperation had to be obtained before demonstrations could be established in school districts. Of the seven experimental states initially selected, two declined to cooperate. The two refusing states were replaced by three to guard against additional refusals. The final design included eight experimental states and eight matched control states.

Because study involvement in the matched control states was limited to a mail questionnaire of sampled SFAs, state cooperation was essential but not required. However, control state officials were notified of the study.

### 3.1.2 Step 2 - Selection of Experimental School Districts

Within the eight experimental states, five school districts per state were sampled. The sampling frame for experimental school districts was restricted to public school districts participating in the school lunch program whose enrollment spanned a K or 1 through 12 grade range. Private schools and public school districts with a restricted grade range were excluded. The school districts were stratified by total enrollment, and sampled with probabilities proportional to enrollment. For example, a school district with an enrollment of 10,000 had twice the probability of seleiction of a school district with an enrollment of 5,000. In the experimental states, 30 of the 40 sampled school districts agreed to cooperate.

Because of the nearness of the start of the school year in one of the replacement states, it was necessary to modify procedures. Three experimental school districts had already committed resources to a non-IVPP application. Therefore a modified set of procedures was adopted in those sites that used the local application forms and did not include the requirement for documentation with application (Quality Assurance Procedure II).[1/] To assure that this modified set of procedures could be independently analyzed, school districts with large enrollments were oversampled.

### 3.1.3 Step 3 - Selection of Control Districts

Within the experimental states, a matched sample of 30 control school districts was selected. Each cooperating experimental school district was matched to a within-state control school district on the basis of enrollment, enrollment percentage in poverty (as a proxy for program participation), and urbanicity. The within-state control school districts were requested not to conduct any verification efforts and to complete a mail questionnaire near the end of school year. All agreed.

### 3.1.4 Step 4 - Selection of Naturalistic Comparison Group

In the eight control states, another matched sample of control school districts was selected. Each cooperating experimental school district was matched to two school districts in the matched control state. Matching was accomplished on the basis of enrollment, enrollment percentage in poverty, and urbanization. The control state matching school districts provided a naturalistic comparison group. Therefore no requests were made to conduct or not to conduct verification efforts.

Each of the control state school districts was notified that it would be included in a mail survey to be conducted later in the school year. Exhibit 3.1 shows the geographic distribution of the sample of experimental and control districts.

## 3.2 EXPERIMENTAL DESIGN

Within the experimental school districts, every school building was randomly assigned to matched treatment groups. Exhibit 3.2 displays the school treatment group assignment method used for the within-school district. School treatment assignment involved four steps.

### 3.2.1 Step 1 - Assignment to Quality Assurance Procedures I and II

Schools were statistically matched and then randomly assigned to Group A or Group B. The schools were statistically matched in terms of grade level (elementary, junior high, high school, special) and enrollment. Referring to Exhibit 3.2, Group A contained one-third of the schools in a district and Group B contained two-thirds. Both groups used the IVPP application (Quality Assurance Procedure I). However, schools in Group A required that the documentation accompany the application (Quality Assurance Procedure II), whereas schools in Group B did not.

### 3.2.2 Step 2 - Assignment to Quality Assurance Procedures III and V

Group A was subdivided into two matched groups of equal size, A1 and A2. In Group A1, the evaluation contractor drew a 10 percent random sample of applications that school personnel then subjected to a documentation consistency check (Quality Assurance Procedure III). In Group A2, the contractor drew a 10 percent random sample of applications with whom school officials conducted a parent telephone conference (Quality Assurance Procedure V).

### 3.2.3 Step 3 - Assignment to Quality Assurance Procedures IV and V

Group B was subdivided into two matched groups of equal size, B1 and B2. In Group B1, the evaluation contractor drew a 10 percent random sample of applications. School officials then conducted a parent telephone conference with sample applicants to verify application information (Quality Assurance Procedure V). In Group B2, the contractor drew a 10 percent random sample of applicants. Applicants in the sample were required to comply with the requirements of the documentation after application with document consistency check (follow-up documentation) procedure (Quality Assurance Procedure IV).

EXHIBIT 3.1: GEOGRAPHIC DISTRIBUTION OF THE PHASE II EXPERIMENTAL AND CONTROL SCHOOL DISTRICTS

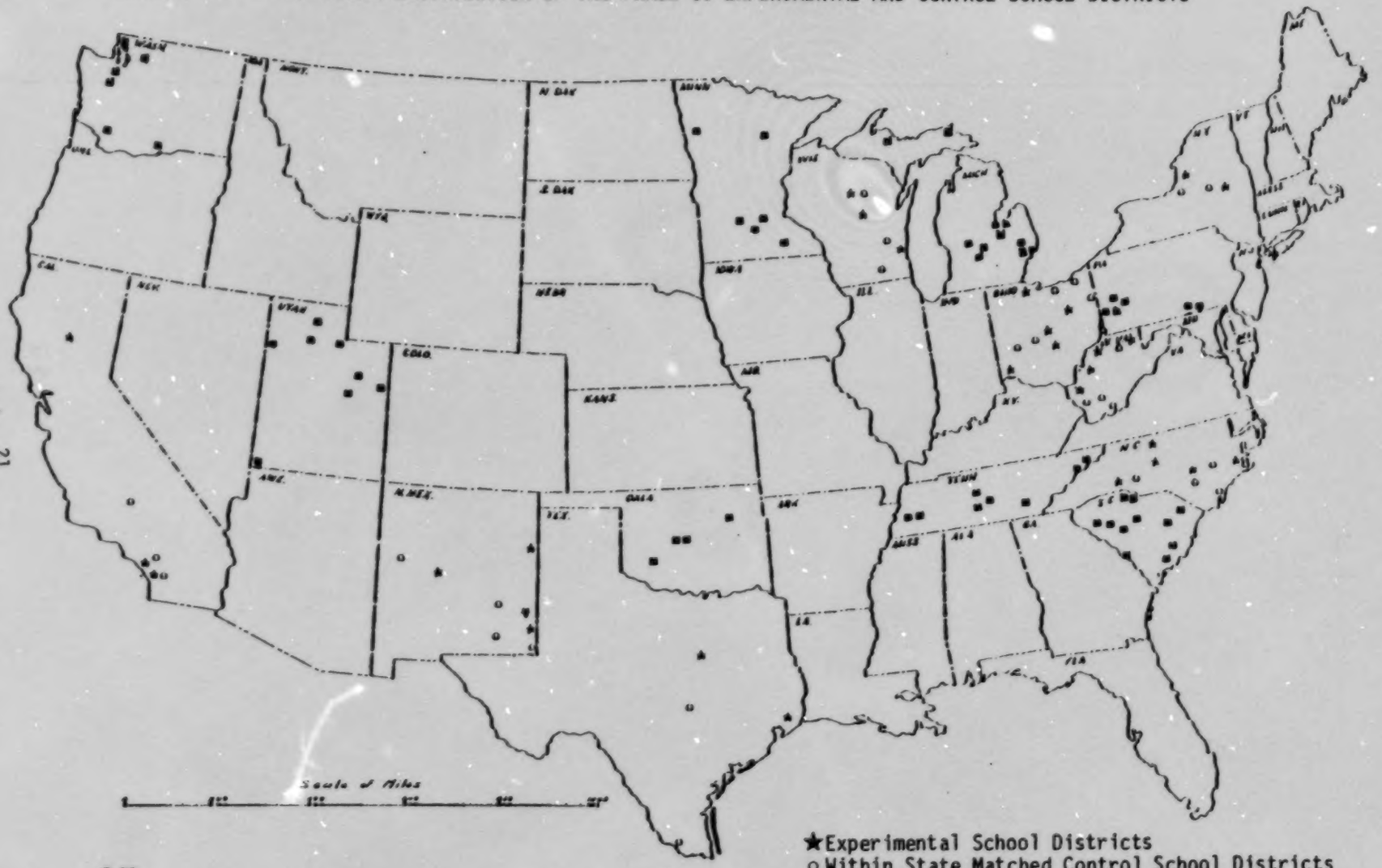
Scale of Miles
★Experimental School Districts
○Within State Matched Control School Districts
■Matching State Control School Districts



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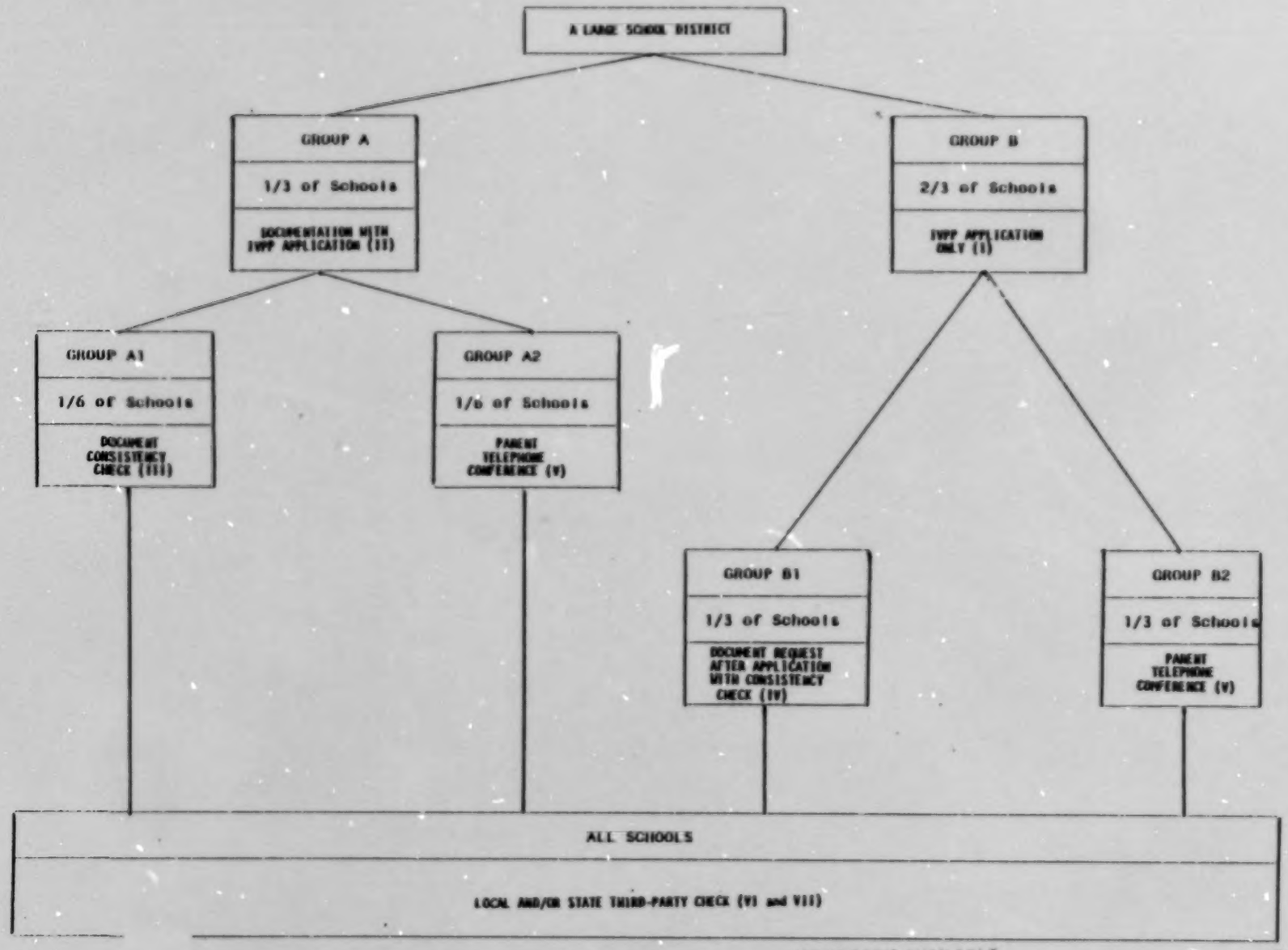
EXHIBIT 3.2: SCHOOL BUILDING ASSIGNMENT TO TREATMENT GROUPS IN THE EXPERIMENTAL SCHOOL DISTRICTS,





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3.2.4 Step 4 - Assignment to Quality Assurance Procedure VII

In all schools, the contractor drew a second 10 percent random sample of applicants. The second sample consisted of 5 percent from the first sample and 5 percent not in the original sample. Applications in the second sample were subject to state or local third-party checks. Local third-party checks (Quality Assurance Procedure VI) or state-level checks (Quality Assurance Procedure VII) were conducted depending on whether arrangements could be made with the state to conduct a large-scale computer verification.

Exhibit 3.3 summarizes the treatment assignments for each of the four treatment groups.

In a number of cases to meet the needs of a particular school district, the assignment methods outlined above were modified. To reduce the burden in low-enrollment school districts, a smaller number of treatment groups was implemented.

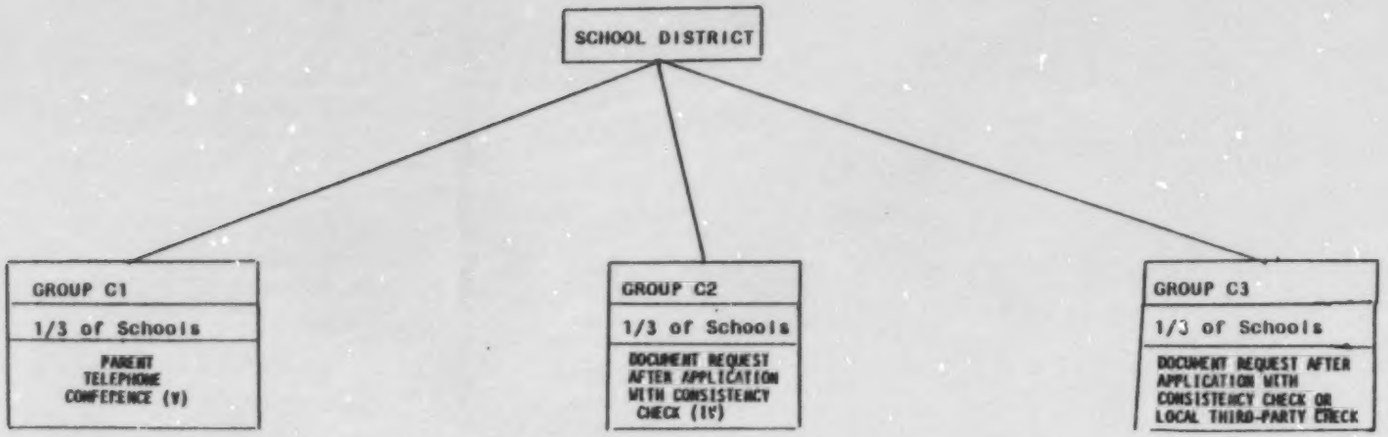
As has been noted, school districts that had already completed their application process when they agreed to participate in the study presented a special problem. In these school districts, it was not possible to implement Quality Assurance Procedures I (IVPP application), II (documentation with application), or III (documentation consistency check). For this group of school districts, a modified set of treatments was developed. Schools were statistically matched and randomly assigned to one of three groups. The groups were statistically matched in terms of grade level and enrollment. Referring to Exhibit 3.4, in Group C1 the evaluation contractor supervised the drawing of a 5 percent random sample of applications. School personnel then conducted a parent telephone conference with sampled applicants to verify application information (Quality Assurance Procedure V). In Group C2, the evaluation contractor supervised the drawing of a 5 percent random sample of applicants. Recipients were required to provide documentation of income (Quality Assurance Procedure IV). In Group C3, 5 percent random sample was also drawn. Applicants in this group were required to either provide documentation of income (Quality Assurance Procedure IV) or to sign a release allowing third-party checks of their reported income (Quality Assurance Procedure VI).

In summary, an experimental design was used because of its capacity to determine the true effects of the pilot quality assurance procedures by controlling external factors that could either bias the results or provide alternative explanations for observed outcomes. The design featured:

EXHIBIT 3.3: TREATMENT GROUP SUMMARY

| GROUP | STEP 1 | STEP 2 | STEP 3 |
|---|---|---|---|
| A1 | IVPP Application Documentation | Consistency Check | Third-Party Check |
| A2 | IVPP Application Documentation | Parent Telephone Conference | Third-Party Check |
| B1 | New Application | Follow-Up Documentation Request | Third-Party Check |
| B2 | New Application | Parent Telephone Conference | Third-Party Check |

EXHIBIT 3.4: SCHOOL BUILDING ASSIGNMENT TO TREATMENT GROUPS IN THE EXPERIMENTAL SCHOOL DISTRICTS THAT DID NOT USE THE IVPP APPLICATION


SCHOOL DISTRICT
GROUP C1
1/3 of Schools
PARENT TELEPHONE CONFERENCE (V)
GROUP C2
1/3 of Schools
DOCUMENT REQUEST AFTER APPLICATION WITH CONSISTENCY CHECK (IV)
GROUP C3
1/3 of Schools
DOCUMENT REQUEST AFTER APPLICATION WITH CONSISTENCY CHECK OR LOCAL THIRD-PARTY CHECK



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- Testing all quality assurance procedures in each school district to eliminate the potential for bias due to the interaction of school district characteristics and quality assurance procedures;
- Independent validation of IVPP application information and quality assurance procedures through in-home audits; and
- Independent measurement of the possible deleterious effects of the quality assurance procedures on program participation by eligible households.

Appendix B summarizes the site-specific characteristics of the experimental school districts.

## END NOTE

1/ School districts that did not use the IVPP application were not able to test the new application (Procedure I), require documentation with the application (Procedure II), or perform the document consistency check (Procedure III). In these school districts, schools were divided into three groups; one group conducted documentation after eligibility determination (Procedure IV), one group performed parent telephone conferences (Procedure V), and in the last group, sampled households were given the option of providing documentation (Procedure IV) or of signing a waiver to permit third-party verification of information on the application (Procedure VI).

# 4

## PHASE II DATA COLLECTION

Phase II of IVPP collected a wide variety of data for use in evaluating the quality assurance procedures. Data were collected on the school district, school, and individual applicant levels.

The primary data collection instruments were:

School-District Level

- Experimental school district questionnaire
- Control school district questionnaire
- Experimental school district monitoring visit report

School-Building Level (in Experimental School Districts Only)

- School summary report on application processing
- School summary report on verification procedures

Applicant Level (in Experimental School Districts Only)

- Application
- Verification outcome report
- In-home audit

In addition, the evaluation contractor maintained records of communications with experimental school district personnel concerning problems encountered while implementing the procedures and records of steps necessary to implement State-level collateral contacts.

This chapter describes the data collection instruments and methods that were used.

## 4.1: EXPERIMENTAL SCHOOL DISTRICT QUESTIONNAIRE

The experimental school district questionnaire was completed by 29 of the 30[1/] experimental school districts and returned by mail following the completion of all verification activities. The questionnaire obtained data on the following:

- Participation in school meal programs by school in School Years 1982-83 and 1981-82;
- Administrative procedures used for processing applications and conducting verifications;
- Administration and cost impact of the quality assurance procedures; and
- Reactions to the quality assurance procedures and suggestions for improvement.

## 4.2: CONTROL SCHOOL DISTRICT QUESTIONNAIRE

The control school district questionnaire (Form C) was completed and returned by mail by 87 of the 90[2/] control school districts. The questionnaire obtained data on the following:

- Participation in school meal programs in school years 1982-83 and 1981-82;
- Administrative procedures used for processing applications;
- Application verification procedures used (this section was included only in the nonexperimental school district control state questionnaire);
- Administrative costs of application processing and verification; and
- Opinions concerning alternative application verification procedures.

## 4.3: EXPERIMENTAL SCHOOL DISTRICT MONITORING VISIT REPORTS

Monitoring visits were conducted to all experimental school districts. The monitoring visits had three purposes: assure procedure integrity and consistent implementation; obtain anecdotal data on school staff experiences with the procedures; and assist school district and school building staff in implementing the procedures correctly. During the monitoring visits interviews were conducted with the school district directors, individuals who processed applications in schools, and interested school district administrators. During the interviews, the application processing and verification procedures were reviewed, and problems encountered or anticipated were discussed. A sample of applications and supporting documentation was reviewed.

## 4.4: SCHOOL SUMMARY REPORT ON APPLICATION PROCESSING

The school summary report on IVPP application processing was completed by school staff in experimental school districts immediately following processing of the application for school meal benefits. Approximately 400 Forms were completed in 24 of the 25[1/] experimental school districts that used the IVPP application. The form obtained data on the time spent processing IVPP applications, the number of applications processed, problems encountered, and experiences of schools requiring documentation with application.

## 4.5: SCHOOL SUMMARY REPORT ON VERIFICATION PROCEDURES

The school summary report on verification procedures was completed twice by school staff in experimental school districts. It was completed immediately following first-stage verification activities (document consistency check, follow-up documentation request, or parent telephone conference). The form was completed a second time following local third party contact verification. Approximately 460 forms were completed in the 29[1/] experimental school districts. The form obtained data on time spent completing the procedures, the number of applications verified, problems encountered, comments on the procedure, and suggestions for improvements.

## 4.6 IVPP AND NON-IVPP APPLICATIONS

Twenty-four[1/] of the 29 experimental school districts used the IVPP application. The other five pilot sites used their own local application form. Every application that was verified using one of the quality assurance procedures was abstracted. Approximately 11,600 IVPP application forms and 3,800 non-IVPP application forms were collected and abstracted for analysis.

## 4.7 QUALITY ASSURANCE PROCEDURE OUTCOME REPORTS

A verification outcome report was completed by school district staff every time a verification was conducted:

- Document consistency check (Quality Assurance Procedure III); or
- Follow-up documentation request (Quality Assurance Procedure IV);
- Parent telephone conference (Quality Assurance Procedure V);
- Local third-party check (Quality Assurance Procedure VI).

A total of 539 document consistency checks, 2,695 follow-up documentation requests, 2,885 parent telephone conferences, and 3,833 third-party check outcome reports were completed. The outcome reports provided data about the type of procedure performed, verification information obtained, discrepancies discovered, actual time spent completing the verification, and effects on program eligibility.

## 4.8 IN-HOME AUDIT

In-home audits were conducted to validate information on income and household size contained on the IVPP applications and the non-IVPP applications used in the experimental school districts. In-home audits were conducted in 15[3/] of the 29 experimental school districts. They were not conducted in the control school districts. The in-home audits provide the basis for determining the true error rates. These were used to assess the deterrent effects of the IVPP application as well as the detection effects of the other quality assurance procedures. In addition, the in-home audit serves as the basis for validating the actual conduct of procedures by school officials as well as recipient reactions to and difficulties associated with the use of each of the quality assurance procedures. Therefore the in-home audits had four functions--measuring errors associated with deterrence; measuring errors associated with detection; validation of the quality assurance procedures; and examining the respondent's assessment of feasibility of the procedures.

To improve the quality of the in-home audit data, respondents were asked to sign a statement certifying that they agreed to provide accurate information. All in-home audit respondents were advised that the information they provided would be used only for statistical purposes and would not be used by school officials to change their eligibility. During the course of the interview, respondents were asked to supply documentary evidence (such as check stubs, program eligibility certificates, etc.) for every source of income identified during the audit. This documentation was used to validate the income they reported on the meal benefit application form. Household size was validated by requesting the respondent to enumerate all household members.

The in-home audit survey resulted in 2,093 completed in-home audits, which produced verification data for 3,767 meal benefit recipients. Of these, 1,217 were completed in school districts that used the IVPP application. An additional 547 audits were conducted in school districts that did not use the IVPP application.

Of the audits attempted with program participants, only 3.25 percent resulted in a refusal to cooperate.

Using data from completed in-home audits, a model was developed in which application information predicted which applicants underreported their income or family size to receive benefits in excess of their true eligibility. This model was then applied to application data from audit refusals to estimate the percentage of refusals receiving excess benefits. Comparison of the estimated excess benefit rates for respondents and refusals was used to estimate refusal rates for those receiving excess benefits and those not receiving excess benefits. (The mathematical details of the analysis are presented in Appendix C.) This anaysis found no significant difference for refusals among eligibles and ineligibles. Therefore nonresponse did not bias the estimates of error used in this report.

## END NOTES

1/ One of the 30 experimental school districts discontinued participation in the study based on advice from its legal counsel.

2/ Three of the 90 control districts failed to complete the questionnaire, even though they agreed to do so when they were recruited to participate in the study.

3/ In-home audits were conducted in 15 of the 29 school districts instead of all experimental districts to minimize data collection costs and logistical problems.

# 5

## EFFECTS OF QUALITY ASSURANCE PROCEDURE I--THE IVPP APPLICATION

Quality Assurance Procedure I, the IVPP application, was designed to deter misreporting. The results of a test of this procedure are reported in this chapter. Similarly, Quality Assurance Procedure II, the IVPP application with documentation, was designed to test the additional deterring effect of requiring applicants to provide documentation with the IVPP application; Chapter 6 presents the test results of this procedure. In contrast, Quality Assurance Procedures III through VII were designed to detect misreporting error after the application was approved. The effects of these procedures are reported in Chapter 7.

Virtually all school districts require households to apply for free or reduced-price school meals at the beginning of each school year. School staff who act as the determining officials (primarily school principals and their staff) are accustomed to reviewing and processing applications at that time.

The Income Verification Pilot Project tested the effectiveness and feasibility of using a redesigned free and reduced-price meal application (hereafter referred to as the IVPP application). The quality assurance objectives of the IVPP application were to reduce income misreporting that results in excess benefits and to obtain detailed information for subsequent verification using any of the quality assurance procedures discussed in Chapter 2. The procedure was tested at 24 experimental school districts, in 316 schools, and involved approximately 51,000 applications. The detailed characteristics of the IVPP application are discussed on page 9 of the report. A copy of the application is shown in Appendix A.

Approximately 251,000 IVPP applications were distributed to students in the 24 school districts that used the IVPP application. Of these, 166,000 were received by households that were only required by IVPP to complete the application. The remaining applications were distributed to households that were also required to complete the application and to document adult income sources--Quality Assurance Procedures II--the subject of Chapter 6. This chapter presents findings about the feasibility and costs of using the IVPP application, the effectiveness of the IVPP application in deterring misreporting, and the effect of the IVPP application on program participation.

## 5.1 THE FEASIBILITY OF USING THE IVPP APPLICATION

Because the IVPP application was designed to deter misreporting and facilitate verification of income statements, detailed information was requested of applicants. School officials who determined eligibility based upon information on the application had to review this information for completeness.

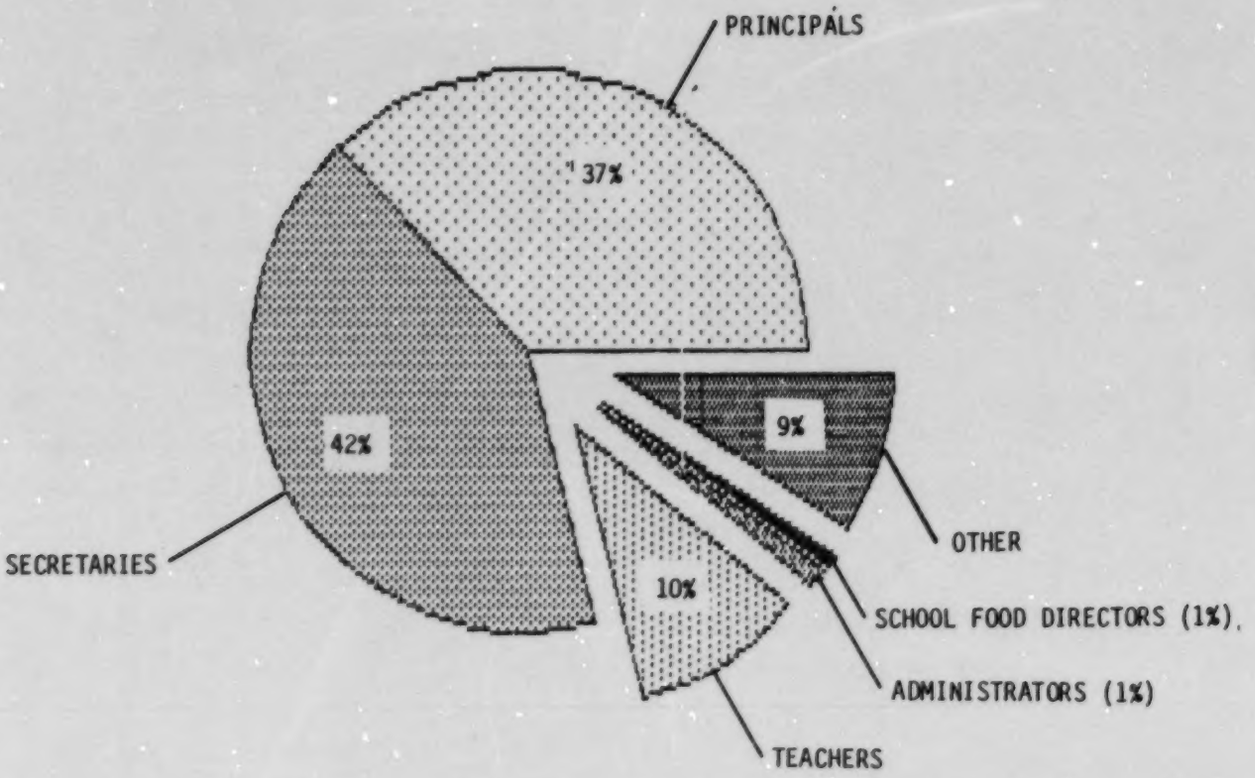
In addition to distributing applications, responding to applicant questions, and collecting completed applications, school officials were confronted with new requirements on the application. It required detailed income by source for each adult in the applying household, contained a detailed and explicit release statement that would permit verification, and requested the signatures of all adults in the household--features designed to reduce misreporting. Applications used in prior years did not contain these requirements.

### 5.1.1 Administrative Time and Cost of Processing the IVPP Application

Determining officials reported that school personnel spent an average of 16 minutes reviewing and approving each of the average 150 IVPP applications submitted by households; this is an average time spent by school officials in an average school. Overall, the average time per school required to process a single application varied from a low of 6 minutes to a high of 22 minutes.

The types of school personnel involved in processing the IVPP application are shown in Exhibit 5.1. Of the total time spent processing applications, 37 percent was expended by principals, 46 percent by secretaries, 10 percent by teachers, and only 1 percent each by administrators and directors of school food services.[1/]

EXHIBIT 5.1: PERCENTAGE OF TIME SPENT BY SCHOOL AND SCHOOL DISTRICT PERSONNEL PROCESSING THE IVPP APPLICATION



Based on reports from 87 control districts, this pattern of staff involvement in processing the IVPP applications was generally repeated in the school districts that did not use the IVPP application. On the average, 28 hours were spent distributing, reviewing, and approving meal applications in schools not using the IVPP application. The time required to process the IVPP application was 52 percent greater than the time required to process a non-IVPP application in comparable school districts.[2]

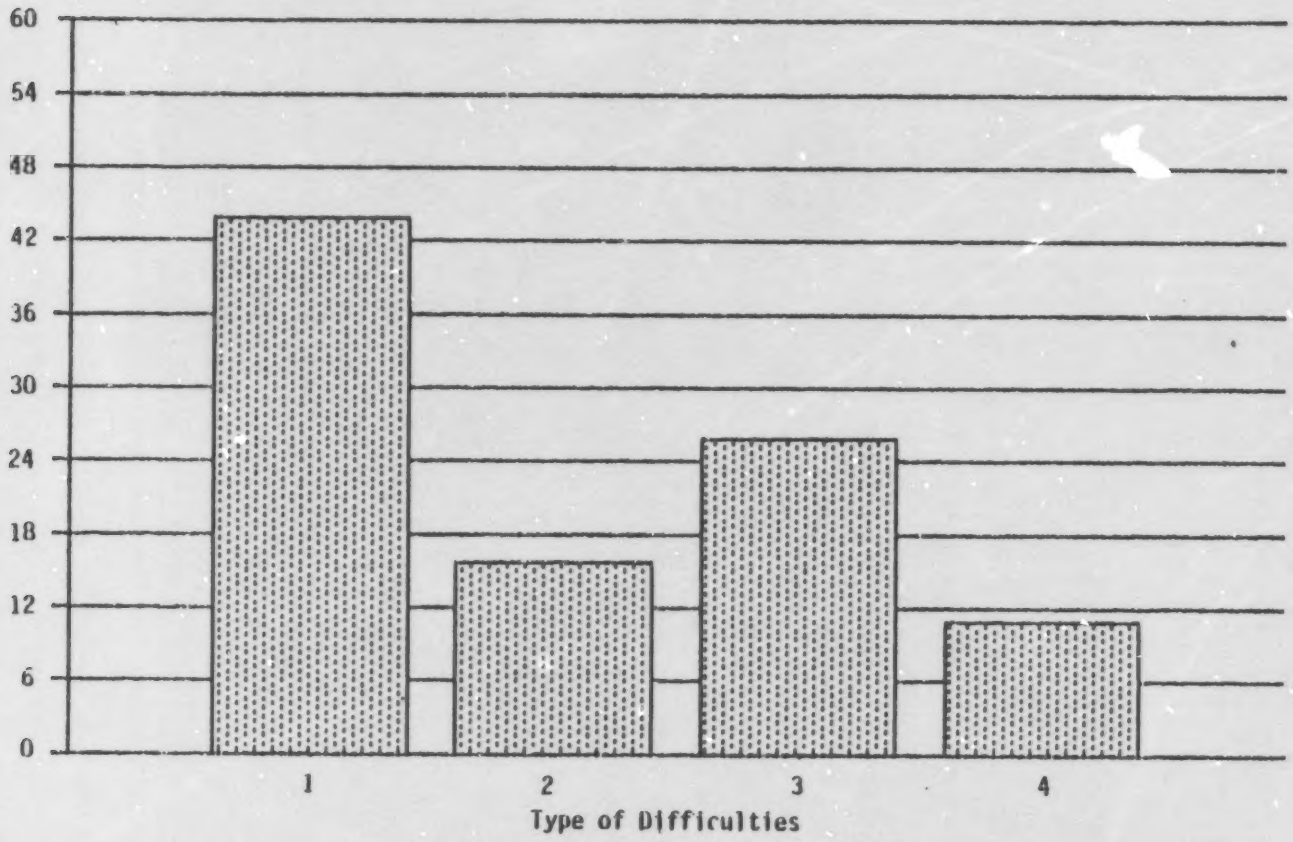
School districts participating in the IVPP project (and more generally, in the school meal programs) absorb the cost of reviewing and approving the free and reduced-price school meal application. Currently, there is no direct federal subsidy provided to school districts to offset these costs.[3] In sites using the IVPP application, the unit cost of processing (i.e., distributing, reviewing, and determining eligibility) a single IVPP application was $4.53. In matched control sites that did not use the IVPP application, the corresponding cost was $3.05. These estimates include the time and materials needed by school districts to distribute the application, review it, and make the eligibility determination. School district funds were used to pay for these costs. SFAs that did not use the IVPP application also used school district funds.

### 5.1.2 Processing Problems and Reactions to the IVPP Application by School Officials

In schools that used the IVPP application, an average of 150 applications were received, of which 39, or 26 percent, were returned because they lacked the Social Security numbers of all adults, income of all adults, or appropriate signature(s).[4] However, school officials reported that an average of less than one application per school was denied because the application was incomplete (e.g., missing the signature of an adult member of the household, missing household income, or missing adult Social Security numbers or not returned within a reasonable time.

Exhibit 5.2 displays determining officials' reports of the types of applicants and staff difficulties that occurred in sites using the IVPP application. Overall, 40 percent of the 269 reporting officials that only processed the IVPP application had received not even one complaint about the application.[5] Sixty percent reported receiving one or more complaints. Of these officials, 44 percent reported that at least one parent did not fully understand the application, and 16 percent reported that at least one parent did not want to complete the application.

EXHIBIT 5.2: SCHOOL DISTRICTS' REPORTS OF PARENT AND STAFF DIFFICULTIES ENCOUNTERED WHEN USING THE IVPP APPLICATION




Determining officials reported that:

1 - parents did not understand the application
2 - parents did not want to complete the new application
3 - staff were unable to perform other functions
4 - staff dissatisfaction

Twenty-six percent of the determining officials reported that increased staff time requirements associated with the IVPP application prevented school staff from attending to other duties on a timely basis. Eleven percent reported staff dissatisfaction with some aspect of application processing. It should be noted that complaints are also routinely received about non-IVPP applications and these reports are provided by school officials who were processing the more complex IVPP application for the first time. If the application were used nationwide, the same reactions could be expected during the first year of use. However, they should diminish in subsequent years.

Overall, the IVPP application requires approximately 52 percent more time to process and approve than an application not explicitly designed to deter misreporting. However, the costs associated with the IVPP application could be expected to diminish over time. It should be noted that school district officials (instead of school staff who process applications) provided time and cost data in school districts that did not use the IVPP application. Therefore they may have underestimated time spent in the schools. It is also evident that the IVPP application caused some adverse reactions among school staff who processed the applications. However, the degree to which these reactions differ from reactions to non-IVPP applications is not known.

### 5.1.3 Applicant Reactions to the IVPP Application

A sample of program participants who completed the IVPP application was surveyed. The IVPP application represented a dramatic change from previous years in the amount and detail of information that was required of the free and reduced-price school meal applicant. New requirements included a detailed listing of all household members and their respective incomes for as many as six adults; indication if the household was receiving food stamps; and a release authorizing verification by school officials. In the prior year, most applications asked only for total household income, family size, and the names and Social Security numbers of all adults and the signature of the adult completing the application.

Households that applied for free or reduced-price school meals were asked to recall the features of the application that distinquished it from prior applications. Overall, most applicant households clearly recalled most of the new features of the application. Over 70 percent noticed each of the following features: the requirement for Social Security numbers; the requirement for detailed and current

monthly income reporting; the requirement for food stamp benefits reporting; and the requirement for verification authorization. This pattern was true of households that were eligible for benefits (as independently determined by the in-home audit) as well as those that were ineligible.

Yet when asked if any of these features of the IVPP application caused concern among the applicants, the large majority of applicants were not greatly concerned about the new application. Specifically, 87 percent were not concerned about being asked to report adult Social Security numbers; 86 percent were not concerned about reporting current monthly income; 86 percent were not concerned about reporting detailed income for each adult household member; 89 percent were not concerned about signing a release authorizing school officials to verify information on the application; and 87 percent were not concerned about reporting the receipt of food stamps.

The IVPP application also apparently presented some difficulties to the applicants who were able to recall specific details of the IVPP application. Thirty percent reported that the IVPP application took more time to complete than previous applications; 23 percent found the application more difficult to complete, while 21 percent found the application more confusing; and 17.5 percent thought they were more accurate when completing the application. However, only 19 percent of the applicants were less sure that they would qualify for free or reduced-price school meals. The same general pattern was exhibited among applicants who were eligible to receive free or reduced-price school meals and those applicants who were ineligible. However, households that received excess benefits were less sure they would receive benefits after completing the IVPP application than were truly eligible households. Eighteen percent of truly eligible households were in doubt of their eligibility compared to 33 percent of the misreporting households that were in doubt. While not definitive, this finding does suggest that the application may deter misreporting among households with incomes exceeding eligibility limits.

In summary, both determining officials and applicants reported some difficulty associated with the IVPP application. School officials tended to suggest that applicants had more problems than the applicants themselves reported. It is likely that some school officials may have inflated the degree of difficulty because they were opposed to the more complex IVPP application. In contrast, applicants may have understated their difficulties because they were asked to recall an application

they submitted several months ago. Therefore it appears reasonable to conclude that the application caused some difficulty, but that the extent of difficulty was not precisely measured. Further, it should be noted that these reports of problems are associated with the first experience with a new application. These problems should diminish in subsequent years as both school officials and parents become more accustomed to the reporting requirements. More importantly, the IVPP application had a greater impact on applicants who misreported income to obtain meal benefits. As shown later in this chapter, the IVPP application significantly reduced error rates, suggesting that the IVPP application does deter much misreporting.

## 5.2 EFFECTS OF THE IVPP APPLICATION ON PROGRAM ERROR RATES

The IVPP application, designed to deter misreporting, is a quality assurance procedure in its own right.[6/] The effect of the IVPP application on overall program error rates cannot be evaluated directly because of the lack of a scientifically-selected comparison group with a known error rate. Therefore the best available comparisons for purposes of evaluating the effect of the IVPP application on error are past studies and Phase II sites that did not use the IVPP application.[7/]

Exhibit 5.3 presents the error rates found in the school meal program based on five independent samples from three previous studies and Phases I and II of the IVPP study. The verifications for both Phase I and II of the IVPP study were conducted through in-home audits as described in Chapter 4. The verification in the National Evaluation of School Nutrition Programs was based on personal interviews that were not supported with documentation. In the case of USDA's Office of the Inspector General, study verifications were conducted by third-party wage checks and visits to employers.

The first three rows of percentages in Exhibit 5.3 represent applicants whose program eligibility was verified as correct. The fourth and fifth rows of Exhibit 5.3 (those receiving reduced-price benefits but eligible for free meal benefits) consist of households who overreported their income or underreported their family size; they did not receive the full benefits to which they were entitled. The next five rows (6 through 10) of the exhibit represent the groups of primary interest to this study--those whose misreporting of income or family size meant they received benefits exceeding those to which they were legally entitled. The final row (11) of the exhibit shows the results of the five sample-based surveys of misreporting on school meal applications.

EXHIBIT 5.3: COMPARATIVE ELIGIBILITY ERROR RATES FOUND IN FREE AND REDUCED-PRICE SCHOOL MEALS QUALITY ASSURANCE STUDIES

| EFFECT | ELIGIBILITY BASED ON APPLICATION | VERIFIED ELIGIBILITY | ROWS | PHASE II SITES USING IVPP APPLICATION 1/ | PHASE II SITES NOT USING IVPP APPLICATION 1/ | 1981-82 PHASE I SITES USING PRELIMINARY IVPP-TYPE APPLICATION | 1980-81 NATIONAL EVALUATION OF SCHOOL NUTRITION PROGRAMS | 1980-81 USDA OIG STUDY |
|---|---|---|---|---|---|---|---|---|
| Correct Benefits | Free | Free | 1. | 70.7% | 69.4% | 67.3% | 62.3% | 51.4% |
| | Reduced-price | Reduced-price | 2. | 15.2% | 6.4% | 11.9% | 9.8% | 17.9% |
| | | | 3. | 85.9% | 75.8% | 79.2% | 72.1% | 69.3% |
| Deficit Benefits | Reduced-price | Free | 4. | 2.3% | 0.4% | 3.3% | 6.1% | 1.8% |
| | | | 5. | 2.3% | 0.4% | 3.3% | 6.1% | 1.8% |
| Excess Benefits | Free | Reduced-price | 6. | 8.7% | 9.8% | 8.0% | 13.1% | 14.8% |
| | | | 7. | 8.7% | 9.8% | 8.0% | 13.1% | 14.8% |
| Ineligibles Receiving Benefits | Free | Ineligible | 8. | 0.5% | 9.5% | 4.6% | 4.6% | 6.1% |
| | Reduced-price | Ineligible | 9. | 2.5% | 4.4% | 4.8% | 4.1% | 7.9% |
| | | | 10. | 3.0% | 14.5% | 9.4% | 8.7% | 14.0% |
| Overall Error Rate | | | 11. | 11.7% | 23.7% | 17.4% | 21.8% | 28.8% |

1/ Based solely on schools not requiring documentation with application.



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The first column of figures in Exhibit 5.3 shows the results for sites that used the IVPP application. As can be seen, 11.7 percent of applicants were found by the in-home audits to be receiving excess program benefits. Row 11 reveals that this is by far the lowest error rate found in the five samples; the four other samples not using the IVPP application had verified error rates of 50 to 250 percent higher than the error rate associated with the IVPP application.8/ Particularly noteworthy are the 23.7 percent error rate found in the Phase II sites that did not use the IVPP application and the 17.4 percent error rate found in the Phase I sites. The Phase I sites used a revised application that incorporated some features of the IVPP application (i.e., more detailed income information and a warning of possible verification), but to a lesser degree. Although the 23.7 percent error rate for Phase II sites that did not use IVPP is based on a limited sample, it represents an error rate associated with the typical 1982-83 school meal application and strongly suggests that the IVPP revisions reduce the error rate substantially. This is corroborated by the lower Phase I error rate (17.4 percent) which is also associated with a revised application.

The total row for ineligibles receiving benefits also reveals an important effect of the IVPP application. The verified error rate for this category associated with the IVPP application is 3 percent, whereas comparable verified error rates are over 300 percent higher. This is important because the cost savings associated with determining ineligibility is greater than the cost savings of correcting eligibility from free to reduced price. In effect, the IVPP application is best at preventing the most costly types of misreporting.

These comparisons constitute strong evidence that the IVPP application has successfully reduced misreporting. Because the Phase II design did not include a statistically matched control group with a known error rate, no definitive estimate of the magnitude of error reduction attributed to the IVPP application was possible. However, it is evident that the IVPP application does reduce applicant error substantially.

## 5.3 EFFECTS OF IVPP APPLICATION ON PROGRAM PARTICIPATION

In SFAs using the IVPP application, participation in the free and reduced-price meal program increased by an average of 2.9 percent. Of the SFAs using the IVPP application, 47 percent indicated an increase in participation and 53 percent a decrease.9/

The effects of the IVPP application on participation can be partially evaluated by comparisons with participation in SFAs that did not use the IVPP application. In all but one of the statistically matched sites that did not use the IVPP application, program participation increased. The average increase in participation in those sites was 8.7 percent. Comparison of this number with the smaller increase of 2.9 percent in SFAs using the IVPP application suggests that the application resulted in a 5.8 percent lower participation rate than would have otherwise occurred. In view of the IVPP application's effectiveness in reducing the participation of ineligibles, it is to be expected that participation would be lower in SFAs using the IVPP application than in SFAs not using the application. It should be noted that the lower rate of participation was based on reports from a small number[10/] of SFAs and therefore is subject to substantial sampling error. The study produced no evidence that the IVPP application adversely affected the participation of eligible individuals.

## END NOTES

1/ The remaining time was spent by a variety of individuals, including school food service staff, cafeteria workers, and aides.

2/ Because the School Food Authority (SFA) instead of schools in sites not using the IVPP application provided data about time to process applications, it is possible that school-level involvement may have been underestimated and SFA-level involvement overestimated. Also please note that the 52 percent increase in time is based on group averages and not individual school figures.

3/ State agencies that administer the program are allowed to spend administrative funds for verification if done at the State level.

4/ It was possible to identify adults on the IVPP application because the age of each household member was requested.

5/ Reports used to develop these estimates were completed by one official (usually a school principal) who summarized the efforts and experiences of school staff.

6/ Because the IVPP application was uniformly implemented in all schools in SFAs that used the IVPP application, the Phase II design contained no within-SFA comparison groups that might be used to evaluate directly the effects of the IVPP application on applicant misreporting. The ability of the evaluation to analyze effects of the IVPP application within SFAs was sacrificed to achieve a uniform application that provided a basis from which the effects of the other quality assurance procedures could be measured.

7/ Tnree of the five Phase II sites that did not use the IVPP application also had in-home audits. Therefore error rates are based on these three sites, which had a combined enrollment in excess of 160,000.

8/ A comparison of the error rates in experimental sites that did not use the IVPP application and the error rate in Phase I IVPP sites should not be interpreted as suggesting that program-wide error rates went up between the 1981-82 and 1982-83 school years. The Phase I IVPP sites used simple error deterring procedures not used by the Phase II non-IVPP application sites. Also, the error rate for the Phase I sites must be interpreted carefully because of the limited sample upon which it is based.

9/ These estimates include only schools that used the IVPP application (Quality Assurance Procedure I). The estimates do not include schools assigned to Quality Assurance Procedure II since documentation could also act as a barrier. Changes in school meal participation are calculated by statistically contrasting participation in the year prior to the study with participation in the study year. The same month in each year is used.

10/ The analysis was based on the 15 SFAs that met the following conditions: used the IVPP application, reported participation rate data, and had a matched control SFA that also reported participation rate data.

# 6

## EFFECTS OF QUALITY ASSURANCE PROCEDURE II--INCOME DOCUMENTATION WITH THE IVPP APPLICATION

A second method to deter misreporting of income information is to require applicants for the free and reduced-price meals programs to supply documentation proving household income when the meal benefit application is submitted. Income documentation submitted with the IVPP application was required of approximately 27,700 applicants in 142 schools within 17 of the experimental school districts.

This chapter describes the test of this procedure in schools that used the IVPP application. The procedure--documentation with application--is intended to increase incrementally the deterrence effect of the IVPP application. The procedure is described on page 11. As the previous chapter demonstrates, when used alone the IVPP application substantially reduces error but increases school district costs associated with distributing, receiving, and approving applications. The information derived from these documents was used to detect error(s) later in the school year as part of the document consistency check (Quality Assurance Procedure III), and the effectiveness of that procedure is discussed in the next chapter.

The evaluation of Quality Assurance Procedure II provides important findings about the feasibility of implementing the procedure and its cost to school districts, the ability of this procedure to improve the error deterring ability of the IVPP application, and the effects of the procedure on school meal participation.

## 6.1 FEASIBILITY OF REQUIRING DOCUMENTATION WITH THE IVPP APPLICATION

This section addresses questions relating to the feasibility of requiring free and reduced-price school meal applicants to supply documentation with the application verifying income. Unlike interim regulatory requirements now in effect, this requirement was mandatory in the IVPP project. Failure to provide documentation was defined as noncompliance with application requirements, and the school district was prevented from determining eligibility. Determining officials and other school staff found it necessary to followup with applicants to ensure that documentation had been submitted and that it was the correct document. The feasibility of Quality Assurance Procedure II is discussed below.

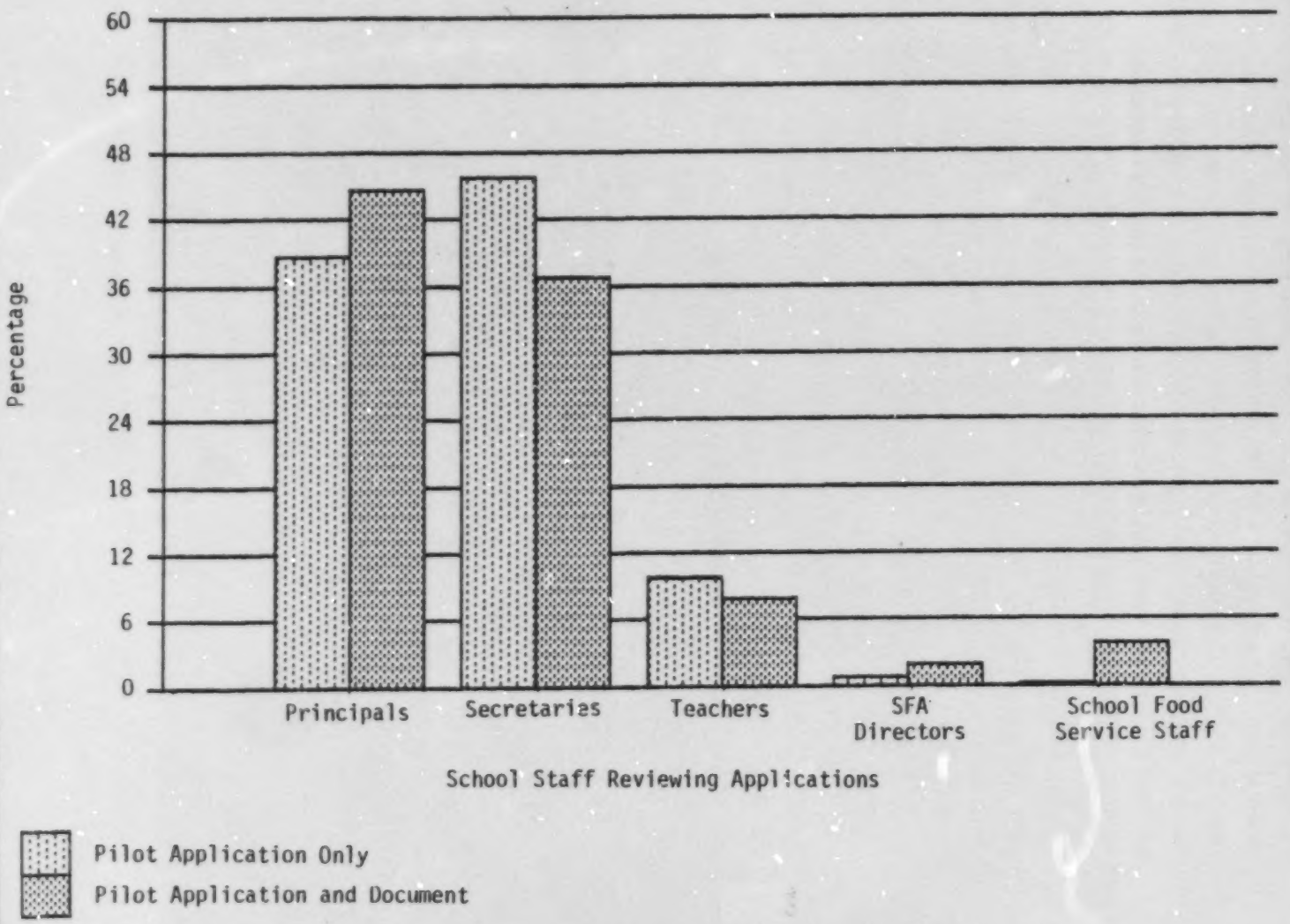
### 6.1.1 Administrative Time and Cost Associated with Documentation with IVPP Application

One-third of the schools in each site where the IVPP application was tested required that all applicants submit documentation with the application that substantiated information provided on the application. Because an experimental design was utilized, it was possible to identify the incremental time and cost increases associated with the verification procedures.

The added requirement of the document with the application increased the time required to determine eligibility by an average of 6 minutes per applicant (22 versus 16 minutes). This represents a 37 percent increase in time. This increase varied from a low of 1.4 minutes to 21 minutes in somewhat comparable school districts. Thus in a typical school where this quality assurance procedure was in effect, an average of 61 hours was required to review and approve an average of 140 school meal applications. The average number of applications received, however, is 6.7 percent lower than the number of applications received in schools that implemented Quality Assurance Procedure I.

As noted in the previous chapter, principals and secretarial staff were responsible for reviewing and approving the IVPP applications. As shown in Exhibit 6.1, this pattern was constant in schools requiring income documentation with the application, noting the following differences: there was a 6 percent increase in principals' time; a nine percent decrease in secretarial time; a 4 percent increase in SFA staff time; and a 7 percent increase in SFA directors' time relative to schools that required only the IVPP application.

EXHIBIT 6.1: PERCENTAGE OF TIME SPENT BY SCHOOL OFFICIALS REVIEWING AND APPROVING THE IVPP APPLICATION ONLY AND THE IVPP APPLICATION PLUS DOCUMENTATION



The reason for these differences was that the documentation with application increased the need for more senior school personnel. Principals often found it necessary to contact parents to obtain the document, and they had to inspect carefully each document to ensure that it complied with guidelines. SFA staff also found it necessary to increase their level of activity in the application review and approval process to ensure that applicants provided the required document.

The unit cost of reviewing and approving the documentation with application was greater than reviewing and approving the IVPP application alone. The increased unit cost was $1.57, for an average total of $6.10 per application with documentation. This cost may be somewhat exaggerated because it is known that the determining officials (primarily principals) are inclined to use the document to assist in determination of eligibility rather than simply to make sure the document had been submitted. Substituting income amounts and redetermining total income and eligibility, which is to be done on the basis of a sample and only as part of Quality Assurance Procedure III, would require additional time. The degree to which this incorrect use of the document increases the time required to process an application with documentation is not definitively known, but it is not believed to be a significant increase.

### 6.1.2 Administrative Problems Associated with Processing the Documentation with Application

When reviewing and approving the application with accompanying documentation, an average of 65 applications received (or 46 percent of the total) were returned to the applicants because the accompanying documentation was incorrect or missing. In spite of this apparently high number, applicants persisted in securing documents and an average of only two applications per school (1.4 percent) were eventually denied benefits because the applicant failed to provide the required document. An average of less than one application per school was denied because the applicant was unable to provide the required document with the application. The result reinforces the finding that more time is required to distribute, review, and approve the IVPP application when it must be accompanied by documentation. On the other hand, findings suggest that among applicants who do submit an application, virtually all (97.6 percent) can provide documentation with the application.

### 6.1.3 Administrative Reactions of Determining Officials to Documentation with the IVPP Application

An important element affecting the feasibility of requiring submission of documentation with the IVPP application was the reaction of school officials who reviewed and approved meal benefit applications. Seventy-eight percent of all determining officials who processed the IVPP application reported that they received at least one complaint from parents about the documentation requirement. However, when asked to identify difficulties encountered while processing the IVPP application with documentation--that is, obtaining a complete application with documentation and reviewing it to determine compliance with the documentation requirement and eligibility based on the application--only 24 percent of the reporting officials indicated that applicants did not understand the application and documentation requirements and 12 percent indicated that parents were reluctant to complete the application and supply documentation. With regard to school staff, 17 percent of the officials reported that their staff were unable to perform routine duties because of the extra time required to review applications. Nine percent of the officials felt that the application created dissatisfaction among school staff, resulting from increased contact with parents.

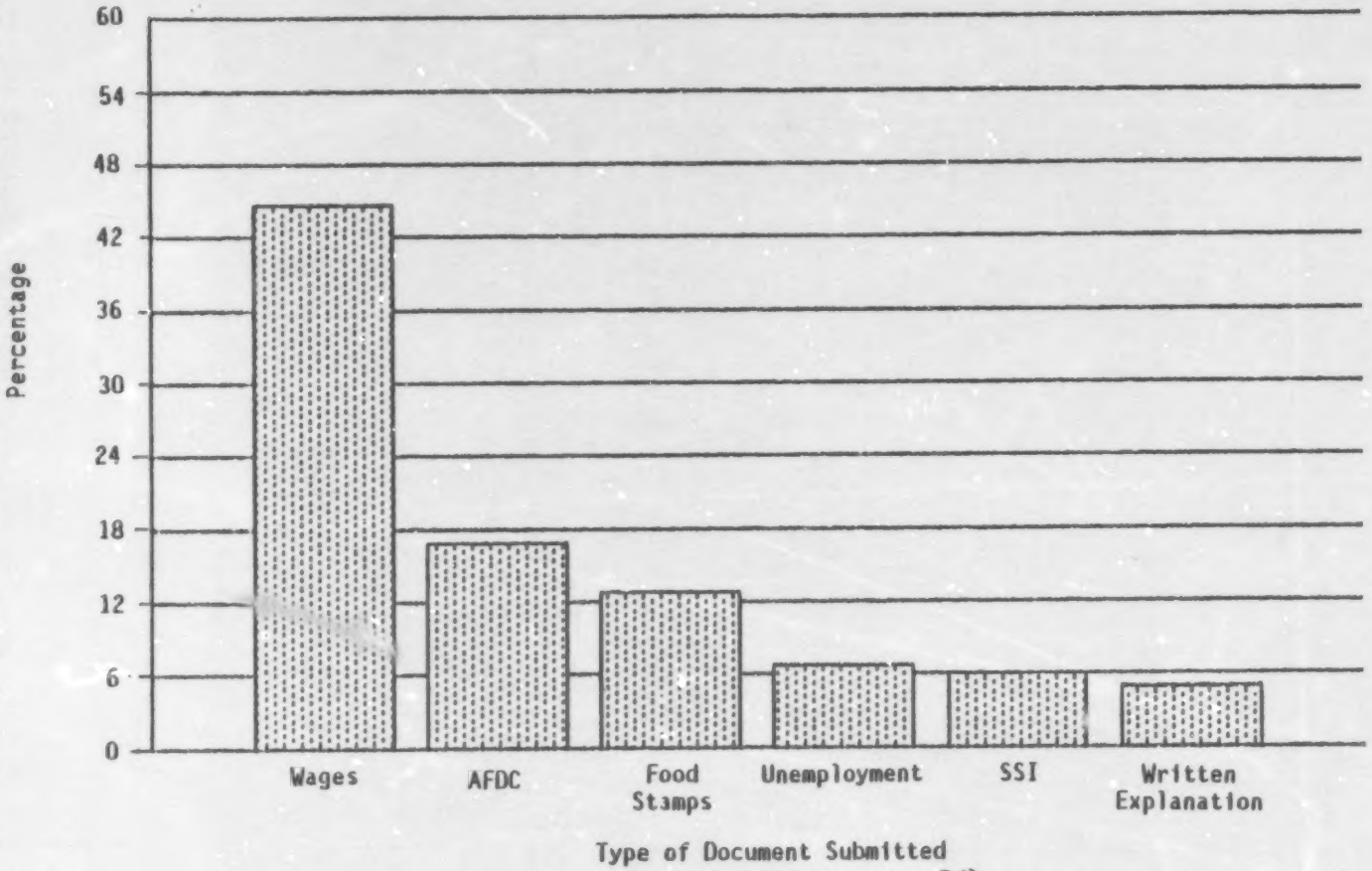
### 6.1.4 Applicant Reactions to Documentation Requirement with the IVPP Application

In-home audits were conducted with households subjected to the documentation with application quality assurance procedure. Eighty-seven percent could not recall any specific difficulty in obtaining the document required for the IVPP application. Six and one-half percent of these households reported that they had to contact a third-party agency (e.g., welfare office, employer) to obtain a copy of the document. Among these same households, the documentation with application requirement did not raise a substantial number of concerns. Eighty-three percent of these applicants reported that although they recalled the requirement, it did not raise any significant concern or problem for them.

### 6.1.5 Types of Documents Submitted with the IVPP Application

The types of documents submitted with the IVPP application are summarized in Exhibit 6.2. Wage documents (such as check stubs and pay envelopes) accounted for 45 percent of the total. Documentation of various unearned income sources accounted for 41 percent of the documents and included these types of benefits:

EXHIBIT 6.2: TYPES OF DOCUMENTATION WITH APPLICATION SUBMITTED BY APPLICANTS FOR FREE AND REDUCED PRICE SCHOOL MEALS



Aid to Families with Dependent Children (17 percent), Food Stamps (13 percent), Unemployment Compensation (7 percent), and Supplemental Security Income (6 percent). Five percent of the applicants provided a written explanation of why they had reported zero income on the application.

These findings suggest that applicants are able to obtain and provide documentation with the application. More importantly, wage documents constitute a major portion of these documents. This enables school officials to verify the most error-prone source of household income.

## 6.2 EFFECTS OF DOCUMENTATION WITH IVPP APPLICATION REQUIREMENT ON PROGRAM ERROR RATES

In 14 of the 20 school districts that implemented this procedure, applicants were sampled for in-home audits. A matched sample of audits of applicants not required to submit documentation with the IVPP application was also conducted. The documentation requirement apparently had a relatively small effect on misreporting.

Exhibit 6.3 displays the results of the audits, which identify error rates. This exhibit shows that applicants required to submit documentation with the IVPP application had a lower overall excess benefit rate than applicants not subjected to the requirement (9.4 percent compared to 11.7 percent, respectively). The observed difference in excess benefit rate is only marginally significant statistically at the .1 level. A comparison of error rates for ineligible households who received benefits reveals that the IVPP application with documentation resulted in an error rate approximately half of the error rate associated with the IVPP application without documentation. The application with documentation does deter misreporting more than the application without documentation. However, the incremental effect of documentation in reducing errors is small relative to the effect of the application alone.

## 6.3 EFFECTS OF DOCUMENTATION WITH IVPP APPLICATION ON PROGRAM PARTICIPATION

In all districts that included schools requiring documentation with the IVPP application, school meal program participation was lower in "documentation" schools than in "nondocumentation" schools. On the average, schools requiring documentation with the IVPP application experienced an 8.7 percent lower participation rate than

EXHIBIT 6.3: ELIGIBILITY STATUS BASED ON APPLICATION DATA AND IN-HOME AUDIT DATA FOR APPLICANTS IN SCHOOLS THAT REQUIRED DOCUMENTATION WITH THE IVPP APPLICATION COMPARED TO SCHOOLS THAT DID NOT REQUIRE DOCUMENTATION

| EFFECT | ELIGIBILITY BASED ON APPLICATION | ELIGIBILITY BASED ON AUDIT | DOCUMENTATION WITH APPLICATION REQUIRED | DOCUMENTATION WITH APPLICATION NOT REQUIRED | INCREMENTAL EFFECT OF DOCUMENTATION[1] |
|---|---|---|---|---|---|
| Correct Benefits | Free | Free | 65.4% | 70.7% | -5.3% |
| | Reduced-price | Reduced-price | 22.8% | 15.2% | 7.6% |
| | | | 88.7% | 85.9% | 2.3% |
| Deficit Benefits | Reduced-price | Free | 2.5% | 2.3% | .2% |
| | | | 2.5% | 2.3% | .2% |
| Excess Benefits | Free | Reduced-price | 7.7% | 8.7% | -1.0% |
| | | | 7.7% | 8.7% | -1.0% |
| Ineligibles Receiving Benefits | Free | Ineligible | 0.0% | 0.5% | -.5% |
| | Reduced-price | Ineligible | 1.7% | 2.5% | -.8% |
| | | | 1.7% | 3.0% | -1.3% |
| Overall Error Rate | | | 9.4% | 11.7% | -2.3% |

1/ Negatives indicate that the IVPP application with documentation has lower error percentages than the IVPP application without documentation.



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schools not requiring it (and 14.5 percent lower than schools not using the IVPP application). The overall effect of the documentation requirement on participation ranged in extremes from only 2.2 percent to as much as 17.0 percent.

The effect of the documentation requirement on program participation can be seen as the sum of its deterrence and barrier effects. Deterrence occurs when the documentation requirement dissuades ineligible households from applying or misreporting eligibility status. A barrier occurs when otherwise eligible households do not apply for program benefits because of the documentation requirement.

There is strong evidence that the documentation requirement resulted in both barrier and deterrence effects. As noted above, in schools requiring documentation with application, 1.7 percent of program participants were found to be ineligible by the in-home audit. This contrasts with a somewhat higher ineligibility rate of 3 percent in schools not requiring documentation. This reduction in the number of ineligible program participants cannot account for most of the 8.7 percent reduction in program participation associated with the documentation requirement. Even if the documentation requirement had eliminated all ineligibles from the program, this could account for only a 3 percent reduction in program participation. Thus deterrence is estimated to account for only 1.4 percent of the 8.7 percent reduction in participation associated with the documentation requirement. The remaining 7.3 percent is due to barrier effects. This means that for every ineligible household deterred from misreporting because of the documentation requirement, more than five eligible households did not participate in the program.

# 7

## EFFECTS OF QUALITY ASSURANCE PROCEDURES III THROUGH VII--IMPLEMENTATION AFTER APPLICANTS APPLY FOR SCHOOL MEAL BENEFITS

In contrast to the IVPP Application and Documentation with Application procedures just reviewed, the IVPP tested five quality assurance procedures designed to detect income misreporting after applications to receive free and reduced-price school meals had been approved. Each of the five procedures differs on the basis of verified information. The document consistency check (Quality Assurance Procedure III) and follow-up documentation (Quality Assurance Procedure IV) focus on a single document relating to the major source of household income. Parent telephone conference (Quality Assurance Procedure V) is a method of verifying all forms of income as well as household size--the determinants of eligibility. Third-party checks at the local level (Quality Assurance Procedure VI) tend to be restricted to verification of eligibility for welfare, whereas State third-party checks (Quality Assurance Procedure VII) can include wage and welfare benefit verification.

Phase II of the Income Verification Pilot Project tested the feasibility and effectiveness of each of these five quality assurance procedures. The characteristics of these procedures are described earlier on pages 12 through 17 of this report. Quality Assurance Procedure III was conducted in 70 schools and involved 539 recipients. Quality Assurance Procedure IV was conducted in 234 schools and involved 2,695 recipients. Quality Assurance Procedure V was conducted in 315 schools and involved 2,885 recipients. Quality Assurance Procedure VI was conducted for 3,833 recipients, while Quality Assurance Procedure VII was conducted for 1,933 recipients. The remainder of this chapter presents findings on the implementation and administrative feasibility of the procedures, the ability of these procedures to detect misreporting that results in excess benefits, the cost of conducting these procedures, and their impact on free and reduced-price school meal program participation.

## 7.1 IMPLEMENTATION AND FEASIBILITY OF QUALITY ASSURANCE PROCEDURES III THROUGH VII

The findings about the feasibility of conducting verification for a sample of approved recipients focus on the way in which the procedures were actually implemented and the reactions of recipients. Cost and time findings are treated in Section 7.3.

### 7.1.1 Problems Associated with Procedure Implementation

In Phase II of the pilot project, the evaluation contractor provided substantial training and technical assistance to each experimental site. Manuals were developed with step-by-step instructions for conducting the quality assurance procedures. Sessions were held in all pilot sites to train the school district personnel who conducted the procedures. Each training session averaged four hours. Follow-up monitoring visits were conducted, and toll-free telephone technical assistance was made available. The quality of implementation was monitored throughout the demonstration. Reports were completed and filed on application processing, procedure activities, outcomes, and program participation. Finally, the in-home audits provided an independent cross-check of the integrity of verification procedure implementation. That is, applicants were asked to confirm and describe the procedure they were selected to undergo. Despite these efforts, the verification procedures were not fully conducted as specified.

The most extensive problem occurred with the document consistency check procedure (Quality Assurance Procedure III). The experiment was designed to separate sharply the procedure of requiring income documentation with the application for all applicants from the procedure of checking information consistency on the document and application for a sample of applicants following approval for meal benefits. These two activities were separated to permit distinct analyses of how well the documentation requirement deterred misreporting as opposed to how useful the documentation was itself in detecting misreporting. Unfortunately, there is strong evidence that officials in many schools used the documentation supplied with the application to change or correct reported income. The distinction between the documentation with application procedure (Quality Assurance Procedure II) and the document consistency check procedure (Quality Assurance Procedure III) was blurred. The result of this implementation problem is that the findings will tend to overestimate the efficiency of the documentation with application and to underestimate the efficiency of the document-consistency-check

procedure. The implementation problem does not explain the high barrier effect associated with Quality Assurance Procedure III, however.

The parent telephone conference also experienced implementation problems. There is evidence suggesting that school officials had difficulty verifying income on the IVPP application. This difficulty manifested itself in various ways. First, some school officials confirmed income reported on the IVPP application rather than asking the recipients to state their income. Second, instead of verifying the household's income when they applied, school officials asked for the household's current income. Each of these problems undermined the procedure's effectiveness. They also influence the findings relative to the time and cost associated with the procedure. Time and cost estimates presented later are probably less than what would be found if the procedure had been implemented faithfully.

The second more critical implementation issue is that many of the prescribed parent telephone conferences (Quality Assurance Procedure V) and follow-up documentation requests (Quality Assurance Procedure IV) were never conducted. Forty-two percent of households selected for parent telephone conferences reported they were never contacted by school personnel, as revealed in the in-home audit. Thirty-one percent of those households selected for follow-up documentation requests reported they never received a request for income documentation. Undoubtedly some households who reported having never been contacted may have simply forgotten because the audit was conducted several months after the application period. Others may not have wanted to admit the schools contacted them. However, there was a very strong clustering of the reports of noncontact by school district and school. For example, in one school district, 71 percent of those selected for parent conference verification reported not having received a call from school district personnel. In another school district, the proportion not reporting contact fell to 3 percent.

Failure of the school districts to conduct faithfully many of the prescribed procedures in spite of extensive training and monitoring raises an important methodological and substantive issue. The methodological issue is how to measure the outcome of experimental treatments that were only partially implemented. The decision was made to measure verification effects using only those cases for which there were verification outcome reports. Thus the findings are measured results of verifications actually conducted and not results of verifications prescribed.

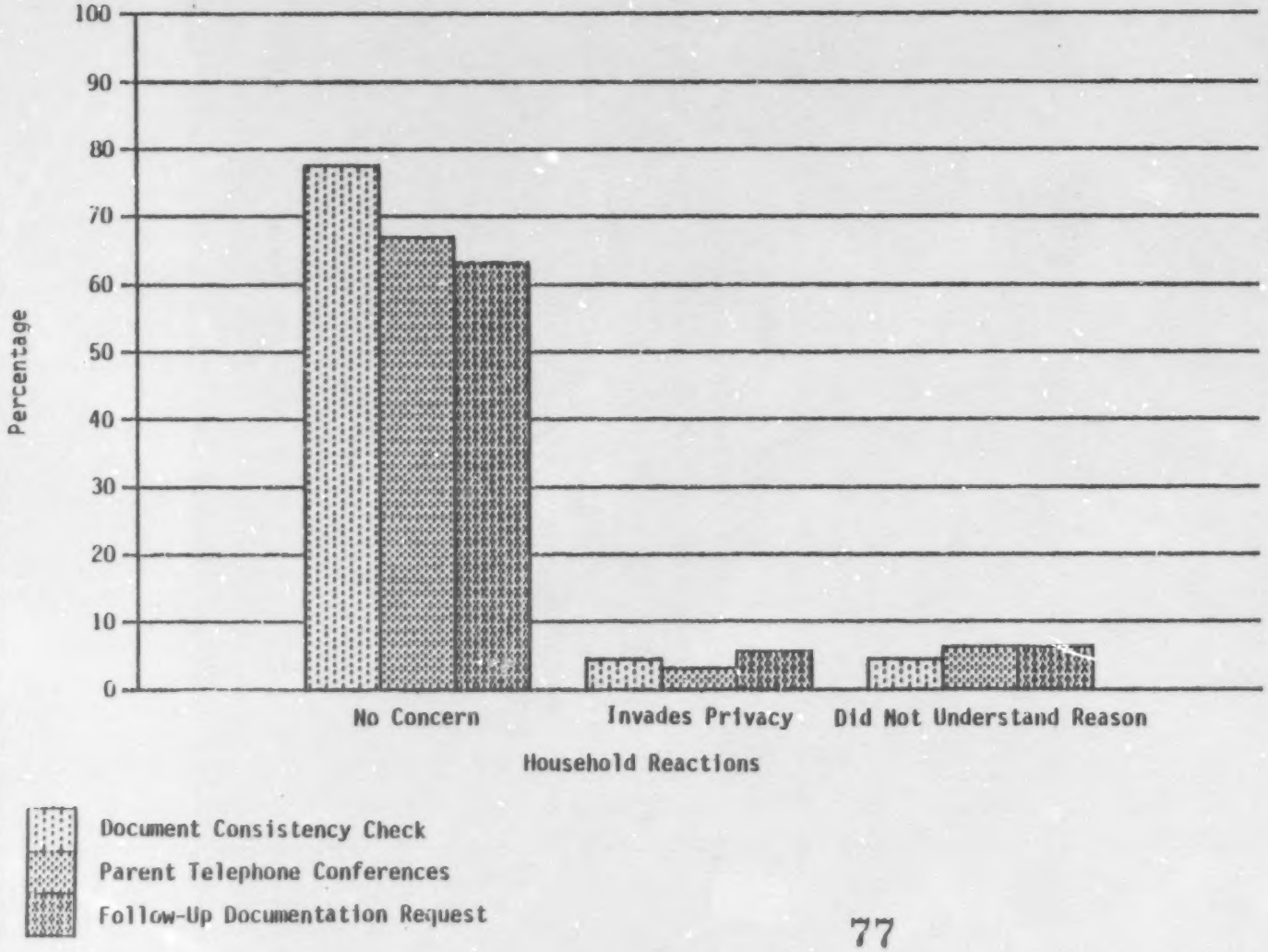
Failure of school districts to conduct many of the prescribed verifications is an important study finding. Despite voluntary cooperation in the study by school districts, extensive training, technical assistance, and monitoring, high levels of noncompliance were found. Therefore it is reasonable to expect that federal regulatory requirements of meal benefit application verification are likely to experience as high or higher noncompliance rates if not accompanied by even more extensive enforcement, training, technical assistance, and monitoring activities. This finding must be viewed as suggestive rather than conclusive since no federal requirements were in place to test compliance.

### 7.1.2 Program Participant Reactions to Quality Assurance Procedures

Audits of participating households in the sites that tested the procedures included a series of questions designed to measure reactions to the following income verification procedures: document consistency check, follow-up documentation request, and parent telephone conference.[1/] As shown in Exhibit 7.1, the findings indicate that the majority of free and reduced-price school meal recipients were not significantly concerned about having their applications verified. Specifically, among verified households, 78.0 percent did not express a significant concern about document consistency checks; 67.4 percent expressed no concern about the parent telephone conference; and 63.3 percent expressed no concern about the follow-up documentation request. Expressed concerns such as "verification was an invasion of privacy" or "confusion as to why the application requested the information" were cited by less than 10 percent of the verified households.

The in-home audits of free and reduced-price meal recipients suggest that providing documents (either with the application or later in the school year) did not create an undue hardship for verified applicants. Eighty-seven percent of recipient households subjected to document consistency checks and 80 percent of households subjected to follow-up documentation stated they had no difficulty obtaining the appropriate document that confirmed their eligibility to receive free or reduced-price school meals. Four percent of the households selected for the follow-up documentation request reported a problem providing the document on a timely basis. However, informal interviews with determining officials suggest strongly that recipients do not comply with the verification requirement until they are confronted with the reality that their children's free or reduced-price meals will

EXHIBIT 7.1: PERCENTAGE OF VERIFIED HOUSEHOLDS REACTING TO VARIOUS VERIFICATION PROCEDURES



come to an end. While these figures may somewhat underestimate the difficulty recipient households experienced in complying with the verification requirements, none of the three procedures were particularly problematic to applicants.

## 7.2 ERROR DETECTION CAPACITY OF QUALITY ASSURANCE PROCEDURES

Samples for the quality assurance procedures that occur after the meal application is approved can be drawn in many ways.2/ This section reports the results of the procedures under two different sample selection methods: random selection and selection using the error-prone profile (EPP) developed in Phase I of IVPP.

The EPP is a method of selecting applications for review with a high probability of having significantly misreported income or family size information. The EPP developed in Phase I of IVPP is very simple and contains only two variables. Exhibit 7.2 presents the scoring method used and explanation of how the scoring is used. Exhibit 7.3 displays the percentage of sampled applicants in Phase I of IVPP receiving excess benefits by the EPP score as determined analytically.3/ As can be seen, the higher the score, the greater the likelihood of receiving excess benefits. In Phase II, the EPP was tested by comparing the discovered errors rate for the various verification procedures both for a random sample and for the subset of that sample having EPP scores of 1 or 2.

The verification procedures were implemented in a sample of school districts using the IVPP application and school districts not using the IVPP application. Type of application used was expected to affect significantly the outcome of the verification procedures. On the one hand, school districts not using the IVPP application had nearly twice the error rate of school districts using the IVPP application (See Exhibit 5.4.). Therefore it is reasonable to expect that verification in these school districts would reveal a higher error rate. On the other hand, the IVPP application was specifically designed to support the verification procedures. Detailed income data were collected on the IVPP application that permitted more precise verification than was possible in school districts not using the IVPP application.

EXHIBIT 7.2: APPLICATION-BASED SCORING SYSTEM FOR ERROR-PRONE PROFILE

| Step | | |
|---|---|---|
| A. | If reported income is within $120 a month of the free or reduced-price eligibility cut-off, write '1' on line A. Otherwise write '0.' | _____(A) |
| B. | If reported income is within $60 a month of the free or reduced-price eligibility cut-off, write '1' on line B. Otherwise write '0.' | _____(B) |
| C. | If the applicant reports receiving Food Stamps, write '-1' on line C. Otherwise write '0.' | _____(C) |
| D. | Sum lines A, B, and C, and write final score on line D. | _____(D) |

## Explanation of the EPP Scoring System

An application is given one point if it reports an income within $120 a month of the free or reduced-price eligibility cut-off. Another point is added if the reported income is within $60 of the free or reduced-price eligibility cut-off. Finally, a point is subtracted if the applicant reports receiving food stamps. The resulting scale has values ranging from -1 to +2.

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EXHIBIT 7.3: DETECTION RATE OF ERROR-PRONE PROFILE FROM PHASE I OF IVPP

| Error-Prone Score* | Percentage Receiving Excess Benefits |
|---|---|
| -1 | 2% |
| 0 | 20% |
| 1 | 40% |
| 2 | 71% |

* Error prone scores were derived statistically by a weighted least squares procedure. A linear transformation was performed to preserve the relative weights and produce whole numbers.

Exhibit 7.4 presents the discovered error rate for the various verification procedures tested for sites using the IVPP application. Two cautions are necessary before reviewing the exhibit. First, when interpreting results, an important distinction must be maintained between internal and external experiment validity. Internal validity addresses the question of whether the verification procedures affected reporting error in the specific school districts in which they were tested. External validity addresses the question of the extent that the Phase II results can be generalized to the population. In all pilot sites, a strict experimental design coupled with relatively large sample sizes acts as a strong guarantee of internal validity. A nationally representative sample of 24 school districts used the IVPP application, therefore results for this group are generalizable. However, only five school districts in Phase II did not use the IVPP application. The resulting sample size is too small to draw statistically generalizable conclusions. Thus comparison of results for non-IVPP application school districts with school districts using the IVPP application must be seen as more suggestive than conclusive.

Also, the verification procedures are not strictly comparable. The document consistency check, by its very nature, could occur only in schools requiring documentation with the IVPP application. Therefore this procedure is perhaps better understood as an adjunct to the documentation-with-application requirement rather than a separate procedure.

The State third-party check of wages (Quality Assurance Procedure VII) procedure was conducted for only four school districts in a single State. Moreover, this procedure was conducted solely by the evaluation contractor, not the school districts, therefore the results for this procedure represent a case study of the potential of State third-party check rather than a nationally representative experimental test.

The first column of figures of Exhibit 7.4 shows that the State third-party check had the highest discovered error rate. Although the tape match was performed in only four school districts, in all four it outperformed all the other procedures. This finding was expected for two reasons. First, a third-party check done by computer precluded the possibility of an applicant withholding or distorting information. Second, the State third-party check targeted the primary source of error: the underreporting of wage income. Phase I of IVPP found that the underreporting of wages accounted for 84 percent of excess benefits awarded. This fact also helps explain why local welfare third-party checks performed so poorly. Misreporting is concentrated among wage earners, not welfare recipients.

EXHIBIT 7.4: ERRORS DETECTED BY VERIFICATION PROCEDURES USING RANDOM SELECTION AND SELECTION BY ERROR-PRONE PROFILE BY TYPE OF FREE AND REDUCED-PRICE SCHOOL MEAL APPLICATION FORM

| VERIFICATION PROCEDURE | DISCOVERED ERROR RATE | | | |
|---|---|---|---|---|
| | IVPP APPLICATION 1/ | | NON IVPP APPLICATION | |
| | RANDOM SELECTION | EPP SELECTION | RANDOM SELECTION | EPP SELECTION |
| Document Consistency Check (Quality Assurance III) | 2.8% | 6.4% | NA | NA |
| Follow-up Documentation (Quality Assurance IV) | 5.4% | 16.4% | 12.8% | 38.9% |
| Parent Telephone Conference (Quality Assurance V) | 6.1% | 13.0% | 8.9% | 19.0% |
| Local Third-Party Check 2/ (Quality Assurance VI) | 0.7% | 0.3% | NA | NA |
| State Third-Party Check 3/ (Quality Assurance VII) | 11.6% | 35.2% | NA | NA |
| Choice of Follow-up Documentation or Local Third Party 4/ | NA | NA | 11.3% | 34.8% |

NA = Not Applicable

1/ Includes only incremental effect of verification procedure, and not the effects of the IVPP application

2/ Third-party checks at the local level were limited verification of welfare and/or food stamp eligibility

3/ The third-party check at the state level reported here were limited to verification of earned (wage) income.

4/ Because the non-IVPP application lacked an adequate release for third-party verification, program participants selected for verification were permitted to sign an appropriate release or submit documentation.



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In interpreting the effectiveness of Procedures III through VII, it is important to keep in mind that they were conducted on a sample of applicant not all applicants. This is in contrast to procedures I (IVPP application) and II (Documentation with Application), which were applied to all applicants. Because procedures III through VII were conducted on only a 10 percent sample of applicants, their immediate effects were limited to this sample. As a result, the effects of the procedures on overall error rates was very small. For example, using random sample 6.1 percent of the parent telephone conferences resulted in discovered errors in districts using the IVPP application. The result of these telephone conferences was to lower the overall error rate for schools using the procedure from 11.7 percent to 11.1 percent ($11.7 \times .9 + (11.7 - 6.1) \times .1 = 11.09$).

None of the procedures, when conducted on a random sample of 10 percent, resulted in more than 1.2 percent reduction in the 11.7 percent error rate. When used in conjunction with error-prone profile selection, the final error rate varied from a low of 8.2 percent with State wage matches to a high of 11.5 percent in the case of local welfare checks. Smaller samples, such as the 3 percent sample recommended by current regulations, would inevitably result in smaller reductions in the final error rates.

Comparing the first and second columns of Exhibit 7.4 reveals that the EPP method of application selection significantly outperforms random selection in four of the five procedures. In fact, for parent telephone conference, follow-up documentation, document consistency check, and State third-party check, EPP selection had more than twice the discovered error rate of random selection. The exception--local third-party welfare verification--was expected. The EPP explicitly selects nonwelfare meal recipients for verification. Consequently it is inherently incapable of identifying welfare recipients with a high probability of misreporting.

The EPP performed equally well in school districts not using the IVPP application. For all quality assurance procedures used in school districts that did not use the IVPP application, selection by EPP was markedly superior to random selection. It is interesting to note that discovered error rates in the school districts not using IVPP application are significantly higher than in school districts using the application. The higher discovery rate appears to be largely a function of a higher overall error rate. When the school district overall error rate, as discovered by the in-home audits, is held statistically constant, no clear pattern exists between discovered error rate and use of the IVPP application.

## 7.3 COSTS OF QUALITY ASSURANCE PROCEDURES PERFORMED FOLLOWING APPLICATION APPROVAL

Costs associated with the procedures were measured on an average unit cost basis--that is, costs were measured only for the immediate costs to sites of conducting each procedure. This measure excluded all start-up and training costs, all costs to applicants of complying with the verification requirements, and all costs to local and state governments assisting with third-party checks. These cost components were excluded on the purely pragmatic grounds that reasonable estimates were not available. In the Phase II sites, much of the training and start-up costs were absorbed by the contractor. Therefore no real-world estimates are available for what it would cost a site to implement and monitor independently a program of application verification. As a result, the costs presented are optimistically low and reflect solely unit costs borne by sites of conducting each individual verification. Appendix C explains the technical methods used to develop the cost estimates.

### 7.3.1 Costs of Quality Assurance Procedures Performed After Applications Are Approved in School Districts Using the IVPP Application

Exhibit 7.5 presents the final measures of verification costs, cost per error, and cost savings ratios of each of the Quality Assurance Procedures performed after IVPP applications were approved. The follow-up documentation requirement, takes an average of 44 minutes to conduct. This requirement needed almost twice as much school staff time as any of the other procedures. Parent telephone conference took 22.7 minutes to complete, and document consistency check and local welfare verification took 17.3 and 10 minutes, respectively. It is important to keep in mind that the measures include only time required by school district personnel to conduct the verifications, and not the time spent processing the IVPP application. The time devoted by local welfare personnel as well as the time spent by households are not included in these time estimates.

Costs per verification include time, materials, and indirect costs expended by school districts to perform verification. They include only costs to school districts and do not include costs to applicants or other agencies involved in verification. As such, the costs to school districts are understated because they do not include costs for start-up and training, which are substantial, nor do they include the costs of lost opportunities to school districts. As a partial adjustment for this underestimate, the numbers in parentheses in Exhibit 7.5 show costs per verification, including costs of

EXHIBIT 7.5: TIME SPENT AND COSTS FOR VERIFICATION PROCEDURES USING RANDOM SELECTION AND SELECTION BY ERROR-PRONE PROFILE AND USING THE IVPP APPLICATION

| VERIFICATION PROCEDURE | TIME PER VERIFICATION 1/ | COST PER VERIFICATION 2/ | COST PER DISCOVERED ERROR: RANDOM SELECTION | COST PER DISCOVERED ERROR: EPP SELECTION | SAVINGS TO FEDERAL GOVERNMENT PER DISCOVERED ERROR 3/ | SAVINGS/COST RATIO 4/: RANDOM SELECTION | SAVINGS/COST RATIO 4/: EPP SELECTION |
|---|---|---|---|---|---|---|---|
| Document Consistency Check (Quality Assurance Procedure III) | 17.3 (33.2) | $7.25 ($13.99) | $258.87 ($499.68) | $133.25 ($257.40) | $88.31 | 0.34 (0.18) | 0.78 (0.34) |
| Follow-Up Documentation (Quality Assurance Procedure IV) | 44.1 (60.1) | $25.86 ($35.24) | $478.99 ($652.77) | $157.71 ($214.99) | $88.31 | 0.18 (0.13) | 0.56 (0.41) |
| Parent Conference (Quality Assurance Procedure V) | 22.7 (38.7) | $13.81 ($23.54) | $225.71 ($384.80) | $106.26 ($181.16) | $88.31 | 0.39 (0.23) | 0.83 (0.49) |
| Local Welfare Verification (Quality Assurance Procedure VI) | 10.0 | $ 6.33 | $634.29 | $1480.00 | $88.31 | 0.14 | .06 |

1/ Time in minutes for performing verification procedure; excludes time to process IVPP application. Numbers in parentheses represent time estimates that include training of school personnel to perform verification. These estimates are based on school-based verifications, a 10 percent verification sample, and four hours of training per school. A lower sampling rate, such as 3 percent, would result in more time (and cost) per verification.

2/ Costs reflect only incremental increases for each procedure and exclude costs of processing the IVPP application. Numbers in parentheses include training costs, as described in the prior note. See Appendix C for a discussion of verification costs.

3/ The federal saving assumes that:
(i) Error is distributed across the free and reduced-price categories as shown in Exhibit 5.3;
(ii) An average of 1.8 children per household participate in the program;
(iii) Eighty-five percent of the eligibles participate on any given school day; and
(iv) Verification is completed by January 1 of the school year. If verification is completed earlier, savings would increase.

4/ Values less than one indicate that costs of conducting the verification exceed savings. Values greater than one indicate that savings exceed costs.

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training school personnel. Most school districts that participated absorbed these costs. This indicates that they made adjustments in their resource allocations to accommodate the study, or that they have some degree of excess capacity, or both. Therefore it is appropriate to view the costs comparatively rather than absolutely. A more detailed discussion of costs is found in Appendix C.

The costs per verification show almost the same ranking by procedure as the time per verification. The one marked difference is that local welfare verifications cost slightly more to conduct than document consistency checks even though they take less time to complete. This reversal is due to the fact that local third-party welfare checks are commonly conducted by senior SFA administrative staff, whereas document consistency checks are usually conducted by clerical personnel.

Dividing the cost per verification by the discovered error rates presented earlier in Exhibit 7.4 results in measures of costs per discovered error. These costs are shown in the fourth and fifth columns of Exhibit 7.5. Examination of these costs shows that, per error discovered, parent telephone conference is the least expensive procedure if random selection is used.

Comparison of the costs per discovered error using error-prone profile selection as opposed to random selection shows that substantial savings can be accrued if the error-prone profile is used. The one exception is local welfare verification because the error-prone profile explicitly selects non-welfare meal recipients.

The fifth column of figures in Exhibit 7.5, savings to the federal government per discovered error, is presented as a benchmark from which the cost-effectiveness of the procedures can be evaluated. The savings were not measured directly but estimated using several empirically-based assumptions. First, the patterns of excess benefits shown in Exhibit 6.4 reflected the pattern of discovered error. Approximately three-quarters of all excess benefits went to applicants who received free-meal benefits but should have received reduced-price benefits. For this group, error discovery savings were restricted to the difference between federal reimbursements for free and reduced-price meals. Next, the savings estimate was based on findings from both the Phase I and Phase II surveys: an average of 1.8 students was covered by each application, and students on the average ate free or reduced-price meals 85 percent of the time they are offered. Finally, the effective date of eligibility changes based on verification procedures was assumed to be January 1, or about four months after the start of the school year.[4/] Earlier

verification would produce greater savings and later verification lesser savings. Collectively, these assumptions produced an estimated savings per discovered error of $88.33.5/

The last two columns of Exhibit 7.5 are simply the ratio of savings per discovered error to the federal government to costs borne by school districts. A ratio greater than one indicates savings. However, a ratio of less than one means that the cost of verification exceeds the savings to the federal government. For example, the upper left-hand figure of .34 means that for every dollar spent by local school districts on document consistency check verifications, $.34 was saved by the federal government and none by school districts.

Note that several factors complicate the savings cost analysis. First, costs and savings occur to different governmental units. All potential savings accrue to the federal government. Moreover, cost savings for the federal government represent revenue loss for local school districts. As a result, when judged strictly from the federal perspective, <u>any</u> quality assurance procedure is likely to be cost-effective because requiring the procedure would involve no direct costs to the federal government and is likely to result in at least nominal cost savings. Conversely, from the school districts' perspective, no procedure could theoretically be cost-effective since any quality assurance efforts are likely to involve additional school district costs. If the procedure discovers or deters misreporting, the monetary effect on local school districts would be revenue loss.

Therefore, to rely solely on savings-cost ratios to evaluate the procedures would be misleading. However, careful analysis of the costs and savings will allow empirical explication of these issues and could form the foundation of an incentive system that would make quality assurance procedures attractive to both the federal government and local school districts. Alternatively, the savings-cost ratios can be seen from the taxpayers' perspective where it makes little difference whether the savings or costs accrue on the federal or local level.

All the savings-cost ratios for verification procedures in school districts using the IVPP application fall below one. Therefore it costs more to conduct the verifications than is saved through error discovery. If costs to school districts of training, start-up, monitoring, as well as costs to applicants and state and local governments are included in the figures, the savings-cost ratios would be much lower.

The sample size of school districts not using the IVPP application was too small and the across-site variance in costs too large to stabilize statistically adequate estimates of verification costs. The great across-site variation in costs per verification for school districts not using the IVPP application was primarily a result of some sites in this group conducting verifications centrally at the school district level and others conducting the verifications at the individual school level. The verification procedures were much more cost-effective when conducted centrally at the district level. The following section discusses this important distinction.

### 7.3.2 The Costs of Centralized and Decentralized Verification

With the exception of one site, local third-party welfare checks were conducted by SFA personnel, not by personnel in the individual schools. For the other procedures, the pattern was reversed. With few exceptions, parent conferences, document consistency checks, and follow-up documentation requests were all conducted by individual school personnel and with little involvement by central district personnel.

This finding reflected the general structure of program application processing in school districts. In the large majority of experimental (and control) school districts, meal benefit applications were distributed, collected, and processed in individual schools. Therefore it was not surprising that the majority of sites in the Phase II sample chose to conduct the procedures at the school level; most school districts simply did not have the central staff resources to undertake the task. Local third-party welfare checks were an exception only because of the necessity of centralized coordination with local welfare agencies. For this procedure, the evaluation contractor provided support services by creating computerized lists of applicant households to be verified. The evaluation contractor also worked directly with many local agencies to explain the verification needs of the experimental sites. It is doubtful that many of the school districts could have completed this procedure on a timely basis without such support.

The decentralization of quality assurance implementation, which appears inherent in the current structure of the public education system, resulted in substantial diseconomies of scale--that is, the relatively low number of verifications per school generated high training and start-up costs relative to the costs of performing the actual verifications. With the Phase II 10 percent

verification sample, an average of fewer than 15 applications were verified per school. Training of school personnel to conduct the procedures required approximately 4 hours each. In addition, substantial technical assistance was provided. The result was that more time was spent in training and assistance than in actually conducting the verifications.

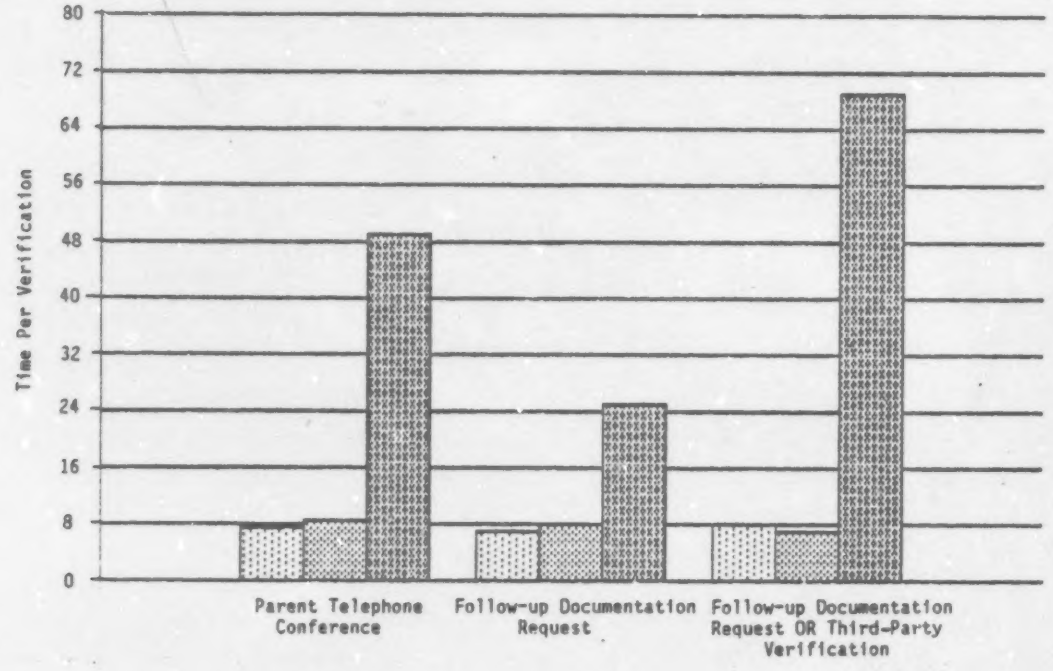
A second important diseconomy of scale involved labor costs. When conducted at the school level, 56 percent of the labor time involved principals and 44 percent all other labor categories--primarily secretarial and clerical. The relatively high salaries of principals resulted in high labor costs for verification.

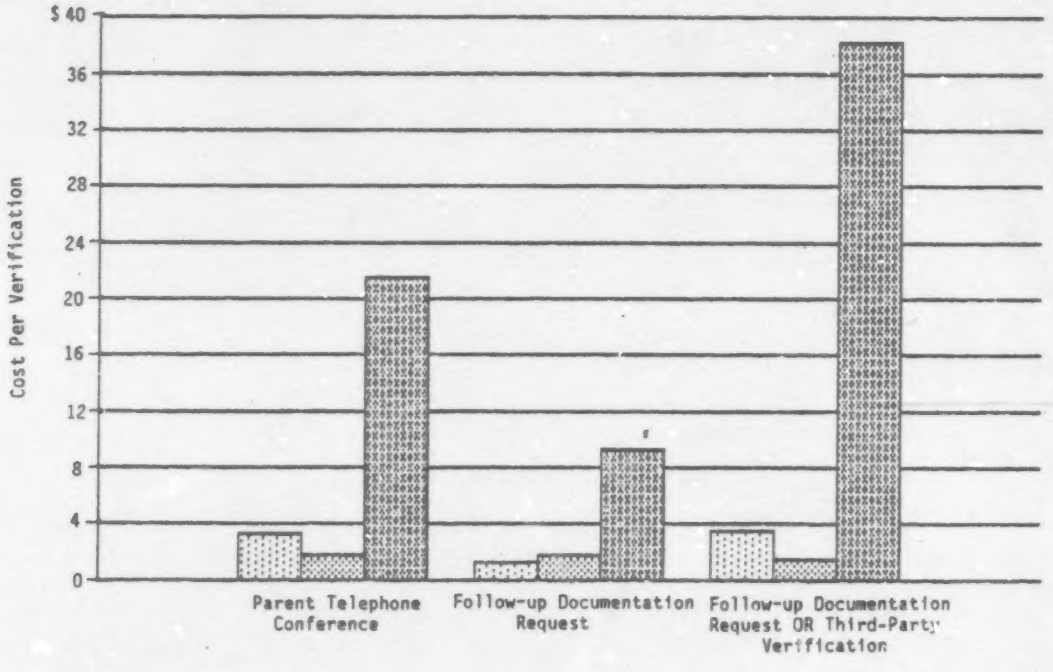
The third diseconomy of scale concerned the time required to learn a procedure. Generally it takes an individual longer to perform a task the first time than for subsequent performances. The small number of verifications per school prevented such routinization. Average time required per verification at the school level was unnecessarily high.

The diseconomies of scale inherent in decentralized income verification can be seen by contrasting the performance of three experimental sites located in the same State. All the sites were located in large cities with similar demographic and economic characteristics. All three used nearly identical applications. However, these were not IVPP applications; they more approximated the USDA-recommended application for the 1982-83 school year. The three school districts had nearly identical program error rates, and all three implemented the same set of quality assurance procedures.[6/] However, in one of the three sites the procedures were conducted at the school level. In the remaining school districts, verifications were conducted centrally by SFA clerical personnel. The results of the verifications were dramatically different.

Exhibit 7.6 compares the time per verification and cost per verification for these three school districts. In the exhibit, school districts 25 and 27 conducted centralized verifications and school district 26 was decentralized. The time and cost figures shown represent only unit measures of conducting the actual verifications; training and start-up times and costs have been excluded. Because of an exponentially larger number of individuals conducting the verifications in school district 26, the actual total time and cost differentials are much larger than those shown in the exhibit. (See Appendix C for a discussion of how costs were measured and Appendix B for more detail on the characteristics of these districts.) The enormous differences in time and costs required are indicative of the inherent inefficiences of conducting verifications at the school level.

EXHIBIT 7.6: COMPARISON OF THE PER VERIFICATION TIME AND COST OF COMPLETING VERIFICATION IN 3 MATCHED SFAS THAT DID NOT USE THE IVPP APPLICATION




District A-- Verification Performed Centrally by the SFA

District B-- Verification Performed Centrally by the SFA

District C-- Verification Performed by Official in Each School Building



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## 7.4 EFFECTS OF QUALITY ASSURANCE PROCEDURES ON PROGRAM PARTICIPATION

The most obvious effect the procedures had on program participation was that applicants found to be ineligible were removed from the program. For several of the procedures, the effects on participation were limited to the removal of ineligible persons. Local third-party welfare check, State third-party wage checks, and document consistency check procedures were generally conducted without direct applicant knowledge or cooperation. These procedures affected participation only if errors were discovered and benefits adjusted.

The three other verification procedures tested--parent telephone conference, follow-up documentation requirement, and choice of third-party verification or follow-up documentation--all required applicant cooperation. Failure to cooperate resulted in the denial of meal benefits. In the case of parent telephone conferences, nearly 100 percent cooperation was achieved. Only 1 percent of applicants contacted for a parent telephone conference refused to cooperate and were removed from the program. The number of noncooperating applicants in the sample was too small to develop a meaningful estimate of what proportion was eligible for benefits.

Compared with parent telephone conference, a much higher percentage of applicants did not comply with the follow-up documentation request. In sites using the IVPP application, the noncooperation rate was 8.3 percent and the cooperation rate was 91.7 percent. When given the option of providing a document or signing a release allowing third-party income verification, 14 percent failed to comply and 86 percent cooperated. (Note that this procedure was only used in sites not employing the IVPP applications.)

Although most applicants did cooperate, it was important to examine the applicants who failed to cooperate. If the procedure was effective and prevented ineligibles from applying, then most of these applicants should be inelible. Based upon the in-home audits, most (7.1% out of 8.3%) were actually eligible for program benefits. If barrier is defined as the percent of noncooperating applicants who are truely eligible, then this procedure has a strong barrier effect. Five out of six of the noncooperating applicants were truely eligible to receive benefits. If barrier is defined as the percent of all applicants subjected to the procedure who fail to comply and are truely eligible, then this procedure has a modest barrier effect. Overall, seven out of every 100 applicants who were asked to submit documents were eligible, but were barred from the program because they failed to comply with the request.

## END NOTES

1/ Questions about third-party quality assurance procedures were not asked because program participants were contacted only if the results of the third-party verification revealed misreporting that would result in a change in eligibility status. Only a very small proportion of the verified households were found to have misreported due to the fact that food stamp eligibility and AFDC benefits were verified rather than wage income.

2/ The quality assurance procedures discussed in this chapter are designed to detect error among approved applicants. Quality assurance procedures discussed in Chapters 5 and 6 were designed to deter misreporting.

3/ The Error-Prone Profile was only used analytically. It was not used by the experimental school districts to select recipients for verification because this would have biased the results of the study.

4/ A four-month period was used because it closely approximates the period of time under interim verification regulations for completing verification.

5/ It should be remarked how relatively low this figure is. One telling contrast is the savings per discovered error in Social Security Disability Allowances. For a recently completed error-detection system that was designed by the evaluation contractor for the Social Security Administration's Office of Hearings and Appeals, average expected savings per discovered error were $30,000, or 340 times as much as the savings per discovered error in the school lunch program.

6/ These procedures were very similar to those tested in sites using the IVPP application. All procedures were conducted after the application had been approved. The procedures were follow-up documentation request, parent telephone conference, and an applicant-exercised option of follow-up documentation or third-party check.

# 8

## SUMMARY AND CONCLUSIONS

This chapter summarizes the results and conclusions of Phase II of the Income Verification Pilot Project. Seven error-reducing and error-preventing quality assurance procedures for the free and reduced-price school meal programs were tested in a national sample of school districts. The summary provides:

- A review of the problem of error in the free and reduced-price school meal programs and factors that will shape the quality assurance procedures intended to remedy the problem
- A description of the seven quality assurance procedures that were implemented on a pilot basis and methods used to evaluate their feasibility, costs, and effects
- A summary of findings on the feasibility, costs, and effects of each procedure, and
- A discussion of the conclusions reached about the results and implications of Phase II of IVPP.

### 8.1 QUALITY ASSURANCE IN THE FREE AND REDUCED-PRICE SCHOOL MEAL PROGRAMS

The problem of misreporting income and household size to obtain free or reduced-price school meals has been documented in a number of studies initiated by USDA. Correcting the problem through the adoption of quality assurance procedures was authorized by the Congress in 1981 with the passage of Public Law 97-35. As this report demonstrates, successful quality assurance implementation by school districts that participate in the free and reduced-price school meal programs must recognize and accommodate factors that characterize the programs. These factors are discussed briefly.

Within the public education system, there is a lack of experience conducting quality assurance for the school meal programs as applied to the verification of applicant household income and size. Other programs, such as food stamps, have a

relatively longer history of using quality assurance procedures to reduce a variety of errors. Repeated studies and verification demonstrations have been conducted to reduce the misreporting of eligibility-related information. Unlike food stamps, there is no administrative structure or expertise in public (and private) primary and secondary education systems that is prepared to implement quality assurance procedures. School districts must start without benefit of the experience and training that food stamps and other programs have developed. In addition, there is no specific source of local school district funding designated for quality assurance (although program regulations allow states to use administrative funds for verification if done at the state level). At the SFA level, regular program meal reimbursements may be applied to verification, although no funds are specifically earmarked for verification. If quality assurance procedures are to be implemented diligently, funding from federal or state sources or changes in the use of existing funds may be necessary.

The potential for savings resulting from quality assurance in the free and reduced-price school meal programs is inherently small. The average annual savings in federal funds for each household determined to have misreported is about $88. This amount is a fraction of the savings per beneficiary achieved through quality assurance in other federally supported assistance programs. Moreover, school districts do not directly benefit from the savings because it is likely that they would be responsible for the cost of the quality assurance procedure but would not share in the savings. Unless costs were recovered from the ineligible misreporting households, school districts would lose the federal reimbursements that would have been used to offset the fixed costs of operating the meal program.1/

## 8.2 QUALITY ASSURANCE METHODS IMPLEMENTED IN PHASE II AND THE METHODS USED TO TEST THEM

The seven quality assurance procedures implemented in this pilot study were:

I. A Revised Application Form designed to deter misreporting and to provide data needed to support the legal and informational requirements of subsequent verification procedures. (The application is referred to as the IVPP application.)

II. Documentation with the IVPP Application to support information about earned income or other benefit program eligibility (e.g., food stamps) reported on the application. It should be noted that this procedure involved only submitting the documents, not cross-checking them with the application, and as such was intended to deter misreporting.

Both these procedures were implemented at the start of the school year when meal applications are submitted and reviewed for eligibility. Thus they are primarily deterrence procedures. In most school districts, these two procedures were tested by school building personnel (e.g., principals and school secretaries) and involved all students.

Five additional quality assurance procedures were implemented later in the school year after applications had been approved. Thus they were primarily detection procedures. The procedures were:

III. Document Consistency Check following approval for benefits to determine if the document initially submitted with the application corroborated information on the application.

IV. Documentation After Application with Consistency Check to obtain documentary proof of income and other benefit program eligibility reported on the application. (This procedure is also referred to as follow-up documentation request.)

V. Parent Telephone Conference following approval of benefits to obtain all application items in order to verify income and family size information originally reported on the application.

VI. Local Third-Party Checks (e.g., welfare office data exchange) following approval of benefits to verify earned income or income maintenance program eligibility information.

VII. State Third-Party Checks (i.e., computer wage tape match) following approval of benefits to verify earned income or income maintenance program eligibility information.

Document consistency check, documentation after application with consistency check (or follow-up documentation), and parent telephone conference were primarily conducted by school building officials. Local third-party checks were conducted by district personnel, and state third-party checks were conducted by the evaluation contractor. All five of these procedures, in contrast to the first two procedures, were tested on a sample of students in each school.

There was, in addition, an important variation in the implementation of procedures. In a select number of large school districts, the IVPP application was not used. Rather the applications developed by the state or school districts themselves were used. In these districts the verification procedures included follow-up documentation request, parent telephone conference, and applicant option of follow-up documentation or local third-party contact.

The implementation and evaluation of the quality assurance procedures were accomplished using an experimental design. This design featured:

- Matching experimental and control states;
- Sampling experimental school districts (where the verification procedures were implemented) in the experimental states and matched control school districts in both the experimental and control states; and
- Statistical matching and random assignment of all schools in the experimental school districts into experimental groups.

Key matching variables included poverty level, location, and school enrollment. A total of 16 states--8 experimental and 8 control--and a nationally representative sample of 120 school districts were selected to participate in the pilot project: 30 experimental sites and 90 control sites. Through attrition during the course of the project, the final study sample included 29 pilot sites and 85 control sites.

Overall, a total of 755 school buildings with a total enrollment of over 379,400 students participated in the experimental school districts. Over 78,600 IVPP applications were processed, of which 33 percent included a document. Ten percent of the applicants in the experimental sites were subjected to one form of verification performed at the school level--parent telephone conference, follow-up documentation request and consistency check, or document consistency check. A second 5 percent sample from the first sample and another 5 percent sample not in the original sample were subjected to either a local or state third-party check.2/

The procedures were evaluated on the basis of data from IVPP applications and non-IVPP applications, detailed outcome reports completed by the school officials who actually conducted the procedures, questionnaires completed by school and SFA personnel, and in-home income audits with a random sample of 1,810 applicants in 15 pilot sites. Also, questionnaires were completed by each of the matched control school districts. The resulting data were analyzed, and the results are summarized here.

Outcomes of the income verification depend, in large part, on which applications are selected for verification. The quality assurance procedures that occurred after applications were processed and approved were analyzed using two different selection methods: random selection and selection using an error-prone profile (EPP). The EPP is a method of selecting applications that have a high probability of significant misreporting errors--errors that result in the receipt of meal benefits to which the applicant is not entitled. Developed as part of Phase I of IVPP, the EPP targets applications that have reported income near the eligibility cut-off point and that report the household does not receive food stamp benefits.

## 8.3 PRINCIPAL QUALITY ASSURANCE PROCEDURE FINDINGS

The principal findings of the test of each of the seven quality assurance procedures are provided. Exhibit 8.1 summarizes many of the findings described in previous chapters.

### Quality Assurance Procedure I: IVPP Application

Among schools that used the IVPP application, an average of 150 applications were received, of which 39, or 26 percent, were returned because they lacked the Social Security numbers of all adults, household income, or appropriate signatures. However, an average of less than one application per school was denied because the application was otherwise incomplete or not returned within a reasonable time.

School personnel spent an average of 16 minutes processing each IVPP application, or 42.5 hours for all applications received by the school. The average time required to process a single application varied from 6 minutes to 22 minutes. The average estimated cost to school districts of processing an IVPP application was $4.53, while the estimated cost of processing a non-IVPP application was $3.05. The difference in cost is attributable to increased time rather than different types of school staff processing applications. These costs do not include costs borne by the applicant, nor do they include training costs.

School personnel in sites using the IVPP application reported a high degree of contact with applicant households. Sixty percent of these officials reported at least one complaint about the IVPP application. Forty-four percent of the determining officials reported that at least one parent did not fully understand the application, and 16 percent reported that at least one parent did not want to complete the application. In an independent survey of applicants, few households reported any tangible difficulties in completing the IVPP application.

EXHIBIT 8.1: SUMMARY OF THE FINDINGS ASSOCIATED WITH THE QUALITY ASSURANCE PROCEDURES TESTED BY THE INCOME VERIFICATION PILOT PROJECT

| QUALITY ASSURANCE PROCEDURES | SUMMARY OF FINDINGS | | | | | |
|---|---|---|---|---|---|---|
| | PRIMARY PURPOSE | TIME PER VERIFICATION | COST PER VERIFICATION 3/4/ | DISCOVERED ERROR RATE 5/ | SAVINGS/COST RATIO | |
| | | | | | RANDOM SELECTION | EPP SELECTION |
| I - IVPP Application | Deterrence | 16 min. | $4.53 | NA | NA | NA |
| II - Documentation with IVPP Application | Deterrence | 22 min.1/ | $6.10 | NA | NA | NA |
| III - Document Consistency Check | Detection | 17.3 min.2/ | $7.25 | 6.4% | 0.34 | 0.78 |
| IV - Documentation After Application with Consistency Check | Detection | 44.1 min.2/ | $25.86 | 5.4% (16.4%) | 0.18 | 0.56 |
| V - Parent Telephone Conference | Detection | 22.7 min.2/ | $13.81 | 6.1% (13.0%) | 0.39 | 0.83 |
| VI - Local Third-Party Contact | Detection | 10.0 min.2/ | $6.33 | 0.7% (0.3%) | 0.14 | 0.06 |
| VII - State Third-Party Contact | Detection | NA | NA | 11.6% (35.2%) | NA | NA |

1/ Includes time to process the application, as well as obtain documentation.

2/ Excludes time to process the application, only includes time to perform each detection procedure.

3/ Deterrence procedures are applied to all applicants. Therefore total costs to school districts are greater than total costs for detection procedures applied to a sample of applicants.

4/ Costs do not include costs for set-up and training, which may be substantial (see Table 7.5).

5/ For procedures III - VII the figures shown are the random discovered error rate. The discovered error rate that can be obtained with the error-prone profile is shown in parentheses.





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In school districts using the IVPP application, 11.7 percent of all program participants received benefits in excess of those to which they were legally entitled. Of these participants, 8.7 percent received free meal benefits but were entitled to reduced-price benefits. Another three percent of the applicants were ineligible to receive any benefits. Among this group, one-half of one percent received free meal benefits but were not entitled to any benefits and 2.5 percent received reduced-price benefits but were not entitled to any benefits. In contrast, 23.7 percent of the applicants in Phase II SFAs not using the IVPP application received excess benefits. Phase I of IVPP, which used a rudimentary form of the IVPP application, found an excess benefit rate of 17.4 percent in 1981-82; the National Evaluation of School Nutrition Programs found a 21.8 percent error rate in 1981-82, and the USDA Office of the Inspector General found a 28.8 percent rate in 1980-81. Thus four samples not using the IVPP application had verified error rates of 50 to 250 percent higher than IVPP application sample error rate. Moreover, the error rate among ineligibles using the IVPP application was between one-third and one-fifth of the error rate among ineligibles in the four samples not using the IVPP application.

These comparisons constitute strong evidence that the IVPP application successfully reduced misreporting, especially among ineligibles. Because the Phase II design did not include a statistically matched control group with a known error rate, no definitive estimate of the magnitude of error reduction attributed to the IVPP application was possible.2/ However, it is evident that the IVPP application does reduce error substantially at the start of the school year.

Given the application's effectiveness in reducing the number of the ineligibles receiving benefits, a decrease in program participation is to be expected. School districts using the IVPP had a 5.8 percent lower rate of program participation than matched control sites. This estimate is subject to significant sampling variance, and it is not known how much of the reduced participation is attributable to deterrence and how much, if any, is due to the application creating a barrier to households who are eligible for program participation.

Quality Assurance Procedure II Income Documentation with the IVPP Application

When reviewing and approving the application with documentation, an average of 65 applications received (46 percent) were returned by each school because the accompanying documentation was incorrect or missing. In spite of this apparently high number, an average of only two applications per school (1.4 percent) were denied benefits because the applicant refused to provide the required document. An average of less than one application per school was denied because the applicant was unable to provide the required document.

Adding the document to the IVPP application as a condition for applying for meal benefits increased the time required to review and approve an IVPP application by an average of 6 minutes. This represents a 37 percent increase in time. This increase varied from 1.4 minutes to 21 minutes. Thus in a typical school where this application requirement was in effect, an average of 61 hours was required to review and approve an average of 140 school meal applications. The average estimated cost to school districts of processing a document and the IVPP application was $6.10, or 35 percent higher than processing the IVPP application alone and nearly twice the cost (97 percent) of processing non-IVPP applications.

Seventy-eight percent of all determining officials who processed the documentation with IVPP application reported that they received at least one complaint from applicants about the documentation requirement. However, in-home audits conducted with households subjected to the documentation with IVPP application requirement revealed that 87 percent of applicants could not recall any specific difficulty in obtaining the required documentation. Six and one-half percent of these households reported that they had to contact a third-party agency (e.g., welfare office, employer) to obtain a copy of the document. Eighty-three percent of these applicants reported that although they recalled the requirement it did not raise any significant concern or problem for them.

The documentation with IVPP application requirement appears to have had a relatively small effect on misreporting. Applicants required to submit documentation with the IVPP application had a slightly lower excess benefit rate than applicants not subject to the requirement (9.4 percent compared to 11.7 percent).

In all schools requiring documentation with the IVPP application, school lunch program participation was lower in "documentation" schools than in "nondocumentation" schools. On the average, schools requiring documentation with the IVPP application experienced an 8.7 percent lower participation rate than schools not requiring it. The overall effect of the documentation requirement on participation ranged from 2.2 percent at the low end to 17.0 percent at the high end.

Deterrence--reduction of misreporting--is estimated to account for only 1.4 percent of the 8.7 percent reduction in participation associated with the documentation requirement. The remaining 7.3 percent is due to barrier effects. This means that for every ineligible household deterred from misreporting because of the documentation with IVPP application requirement more than five eligible households did not participate in the program.

Quality Assurance Procedure III: Document Consistency Check

In schools requiring income documentation with the IVPP application, the income document was compared with information on the application for a sample of applicants. This procedure took place after approval of the application. The intent of the procedure was to detect errors on the IVPP application. The document consistency check procedure detected a 2.8 percent excess benefit rate when applications were selected at random and 6.4 percent when selected using the EPP.

The average document consistency check took 11 minutes and cost $4.76. However, when the time and cost of obtaining the document is added, these numbers rose to 17 minutes and $7.25 per consistency check. The resulting totals indicate that for every dollar spent by SFAs on obtaining documents and conducting consistency checks, the federal government saved $0.34 if random selection was used and $0.78 if EPP selection was used.

Quality Assurance Procedure IV: Documentation Following Application with Consistency Check

In presenting the results of this follow-up documentation procedure, school districts that used the IVPP application are contrasted with school districts that did not use the IVPP application.

Despite extensive training, technical assistance, and monitoring efforts, 31 percent of the recipients selected for this procedure reported never having received a request for income documentation. Therefore it is reasonable to expect that a federal regulatory requirement of follow-up documentation would likely experience

as high or higher noncompliance rates if not accompanied by even more extensive enforcement, training, technical assistance, and monitoring activities.

Eighty percent of households subjected to the requirement stated they had no difficulty obtaining the appropriate document that confirmed their eligibility to receive free or reduced-price school meals. Only four percent of the households selected for the follow-up documention request reported a problem providing the document on time.3/ However, informal interviews with school officials suggest strongly that recipients only complied with the verification requirement when confronted with the reality that their children's free or reduced-price meals would come to an end. Therefore these figures may underestimate the difficulty recipient households experienced in complying with the requirement.

When selected at random, 5.4 percent of follow-up documentation requirements conducted revealed an excess benefit award. When recipients were selected for verification using the error-prone profile, the discovered excess-benefit rate rose to 16 percent.

Each follow-up documentation requirement took school officials an average of 23 minutes to conduct. The average follow-up documentation requirement cost SFAs $25.86 to conduct. This translates into $478.99 per discovered error using random selection and $157.71 using EPP selection. The average discovered error saves the federal government $88.31 in meal reimbursements. Therefore for every dollar spent by school districts on follow-up documentation requirements, the federal government saved $0.18 when random selection was used and $0.56 when EPP selection was used.

An estimated 8.3 percent of all applicants subjected to the follow-up documentation requirement did not cooperate and were subsequently removed from the program. If the procedure operated effectively, then this group should be comprised largely of ineligibles. However, most of those removed for noncooperation (7.1% out of 8.3%) were actually eligible for program benefits. This means that for every ineligible household removed from the program for noncooperation with the procedure, nearly six eligible households were removed for noncooperation. However, since more than 90 percent complied with the request, overall only 7.1 percent of the applicants subjected to this procedure were eligible and were also barred from participation because they did not comply with the documentation request.

Findings in school districts not using the IVPP application differed from those using the IVPP application in two important aspects. First, the discovered excess

benefit rates were much higher. When random selection was used, a 12.8 percent error rate was found. When EPP selection was used, a 39 percent error rate was found. Second, the time necessary to conduct the procedure and the cost per verification were much lower. This was due to two factors. The overall error rate was much higher in school districts not using the IVPP application. Also, the majority of school districts not using the IVPP application conducted the verifications using central SFA staff, whereas almost all the school districts using the IVPP application conducted the verifications on the individual school level. Centralization of the verification process resulted in substantial economies of scale. Wage costs were much lower because clerical staff rather than school principals conducted the procedure. Training and start-up costs were lower because fewer individuals were involved. Time per verification was lower because of greater routinization of action.

Quality Assurance Procedure V: Parent Telephone Conference

The results of the parent telephone conference are presented by contrasting school districts that used the IVPP application with school districts that did not use the IVPP application.

Forty-two percent of recipients selected for parent telephone conferences reported never having been contacted. As with the follow-up documentation requirement, this finding suggests that without extensive enforcement, training, technical assistance, and monitoring, a federal regulatory requirement of parent conference verification would also experience a high noncompliance rate.

Of the recipients contacted for parent telephone conferences, less than 1 percent refused to cooperate. The average parent conference required 23 minutes, including time for call-backs and outcome report completion. The average conference cost for school districts was $13.81.

Using random selection, parent conferences revealed a 6.1 percent excess-benefit rate. Under EPP selection, the discovered excess-benefit rate rose to 13 percent. Given average savings to the federal government of $88.31 per discovered error, it cost local school districts $1.00 to save the federal government $0.39 in excess-benefit payments when random selection was used and $0.83 when EPP selection was used.

Quality Assurance Procedures VI and VII: Third-Party Checks at the State and Local Level

Two types of third-party verification procedures were conducted: verifications through local welfare offices and wage income matches with computerized state wage files. Because such third-party checks required signed authorizations by applicants, they could only be conducted in school districts that used the IVPP application because it included such an authorization. The local welfare verifications were conducted centrally by SFA staff because of the need to coordinate contact with local welfare offices. The state wage tape match was conducted by the evaluation contractor in one state for four pilot school districts. Therefore the wage tape match results must be seen as a case study and should not be generalized. Further, because the evaluation contractor conducted the wage match, cost figures are not available. Aside from set-up, these costs should be similar to costs for local level third- party matches.

Local third-party welfare checks had a discovered excess-benefit rate of less than 1 percent. In half the school districts using this procedure, not a single error was discovered. This result was expected because local welfare offices have information only on individuals that participate in the food stamp or welfare programs, and prior analysis by IVPP showed such individuals to have a very low rate of excess benefits.

The state wage tape match was much more successful with a discovered excess benefit rate of 11.6 percent under random selection and 35.2 percent when EPP selection was used.

The findings collectively suggest that quality assurance procedures can be implemented in the free and reduced-price school meal programs and that it is possible to reduce misreporting. Phase II of the Income Verification Pilot Project suggests that the most successful quality assurance strategy relies primarily on deterrence. A carefully designed meal benefit application produced the greatest

reduction in error with the least cost and turbulence to households and school districts. Verification of recipients after they were approved to receive meal benefits was most effectively accomplished by first selecting applications with a high likelihood of error using an error- prone profile. The verification method used must be able to detect earned income. Of the methods tested by IVPP, third-party check with agencies that maintain wage and earnings records showed the most promise.

## 8.4 CONCLUSIONS

Phase II of the Income Verification Pilot Project was a national experiment that tested seven quality assurance procedures designed to reduce applicant error in the school meal programs. These seven procedures were developed by adapting procedures used in other federal programs and in some school districts. Because the per-recipient benefits levels are low ($200 per child per year), these adaptations focused on minimizing time and effort to implement the procedures. The seven procedures consisted of two deterrent procedures that were expected to prevent errors before benefits were awarded and five detection procedures that were expected to detect errors after benefits were awarded. Conclusions about all of the procedures are summarized in Exhibit 8.2 and discussed below. The exhibit describes a variety of quality assurance implementation and effectiveness factors relative to each of the procedures tested by the IVPP.

### CONCLUSION 1: THE REVISED IVPP APPLICATION EFFECTIVELY REDUCES MISREPORTING

IVPP Application Substantially Reduces Program Error Rate.

The revised IVPP application, which requests detailed income reporting and informs applicants that they may be subjected to verification, reduces the program error rate to 11.7 percent, as compared with 23 percent for non-IVPP applications. The application virtually prohibits ineligibles from receiving benefits, with only 3 percent of all benefits distributed to ineligibles. Further reductions in this error category would be very difficult to achieve.

IVPP Application Reduces Error Dollar Losses.

When the 11.7 percent error rate is translated into error costs (i.e., the percentage of dollars lost to fraud and abuse as a function of total program expenditures), the dollar error rate is low, approximately 5 percent. Relative to other procedures tested, the IVPP application produces the greatest savings because it prevents the misallocation of meal benefits for the entire school year and it affects all, not a sample of applicants.

EXHIBIT 8.2: SUMMARY OF CONCLUSIONS

| | QUALITY ASSURANCE PROCEDURES | | | | | | |
|---|---|---|---|---|---|---|---|
| | I APPLICATION | II APPLICATION PLUS DOCUMENTATION 1/ | III APPLICATION PLUS DOCUMENTATION PLUS CONSISTENCY CHECK 2/ | IV FOLLOW-UP DOCUMENTATION PLUS CONSISTENCY CHECK | V PARENT CONFERENCE | VI LOCAL WELFARE CHECK | VIII STATE WAGE MATCH |
| Purpose | Deterrence | Deterrence | Detection | Detection | Detection | Detection | Detection |
| Timing | Before Benefits Distributed | Before Benefits Distributed | After Benefits Distributed | After Benefits Distributed | After Benefits Distributed | After Benefits Distributed | After Benefits Distributed |
| Applicants Affected | All | All | Sample | Sample | Sample | Sample | Sample or All |
| Agency Responsible for Implementation | School or School District | School or School District | School or School District | School or School District | School or School District | School District and Local Welfare Office | School District and State Employment Security Office |
| Error Reduction Capability | High | Low | Very Low | Low | Low | Very Low | High |
| Effect of Error-Prone Model | NA | NA | Increased Error Reduction | Increased Error Reduction | Increased Error Reduction | Decreased Error Reduction | Increased Error Reduction |
| Per-Case Cost to School Districts | $4.53 | $6.10 | $7.25 | $25.86 | $13.81 | $6.33 | $6.33 3/ |
| Savings to USDA | High | Low | Low | Low | Low | Very Low | Potentially High |
| Cost/Burden to School Districts | Low | Medium | Low to Medium | High | Medium to High | Low | Low |

1/ Refers only to incremental effects of documentation, even though application is necessary and also has effects.

2/ Refers only to incremental effects of consistency check, even though application and documentation are necessary and they also have effects.

3/ Estimated.



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EXHIBIT 8.2: SUMMARY OF CONCLUSIONS (Continued)

| | QUALITY ASSURANCE PROCEDURES | | | | | | |
|---|---|---|---|---|---|---|---|
| | I APPLICATION | II APPLICATION PLUS DOCUMENTATION 1/ | III APPLICATION PLUS DOCUMENTATION PLUS CONSISTENCY CHECK 2/ | IV FOLLOW-UP DOCUMENTATION PLUS CONSISTENCY CHECK | V PARENT CONFERENCE | VI LOCAL WELFARE CHECK | VIII STATE WAGE MATCH |
| Cost/Burden to Applicants | Low | Medium | None | Medium | Low | None | None |
| Cost/Burden to Third Party | None | Low or None | Low or None | Low or None | None | Low | Low |
| Barrier to Participation | Low or None | High | None | High | Low or None | None | None |
| Desirable School Configuration | Any Configuration | Any Configuration | Centralized Preferable | Centralized Preferable | Centralized Preferable | Centralized Necessary | Centralized Necessary |
| Amount of Assistance to School Districts Needed to Assure Success of Procedure | Low or None | Low or Medium | Medium | Medium | Medium | High | High |
| Requires Updates/Modifications to Sustain Effectiveness | Essential | Desirable | Desirable | Desirable | Desirable | Desirable | Desirable |
| Requires Applicant Cooperation | Yes | Yes | No | Yes | Yes | No | No |
| Requires External Agency Cooperation | No | Occasional | Occasional | Occasional | No | Yes | Yes |

1/ Refers only to incremental effects of documentation, even though application is necessary and also has effects.

2/ Refers only to incremental effects of consistency check, even though application and documentation are necessary and they also have effects.

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There Is No Evidence to Suggest That the IVPP Application Acts As a Barrier.

In view of the removal of virtually all inelgibles from the program, the IVPP application was associated with reductions in program participation. However, the revised study application does not present a discoverable barrier to participation for eligible households.

IVPP Application Is the Least Expensive Procedure for School Districts to Implement.

Although it costs school districts about $1.50 more to process the IVPP application than non-IVPP applications, the IVPP application was much less expensive for school districts to implement than any of the other quality assurance procedures tested. Further, this cost should diminish in subsequent years as both schools and parents become more accustomed to the IVPP application's reporting requirements and format.

CONCLUSION 2: SUSTAINED EFFECTIVENESS OF THE IVPP APPLICATION IS UNKNOWN

It is believed that the IVPP application reduced unintentional misreporting by clearly indicating the types of income to be reported for each adult in the household, and reduced intentional misreporting with the explicit threat of possible verification. However, because the pilot study was of limited duration, it is not now possible to estimate the continuing effectiveness of the application. It is likely that verification will have to be carried out to some degree to deter intentional and careless misreporting. However, study findings do not offer guidance on how widespread or intense income verification procedures need to be in order to sustain the deterrent effect of the application over time.

CONCLUSION 3: DETECTION PROCEDURES ARE NOT COST-EFFECTIVE

None of the tested income verification detection procedures save more money than they cost. Moreover, these costs accrue almost exclusively to school districts and not to states or to the federal government. The high local costs to conduct verification are due in large part to the fact that higher paid school personnel (e.g., principals) typically conduct verification. Detection procedures do not produce substantial savings because they are implemented after applications are approved. In contrast to the revised application, the detection procedures, in general, present a barrier to participation for eligible households.

Procedures Involving Documentation Are Least Feasible.

Documentation requested with the application and after the application was approved produced barriers, thereby barring eligibles from the program. Document requests were expensive for school districts to process, and the document did not achieve substantial error reductions over and above the application.

Local Third-Party Welfare Checks Are Ineffective.

Although less expensive for school districts to implement because of economies of scale, third-party checks with welfare offices did not detect errors. This is probably because welfare recipients are often eligible for meal benefits.

State Third-Party Wage Matches Appear Effective, But Would Be Difficult To Implement.

A wage match was conducted by the contractor for school districts in one state. The match was highly successful in discovering errors. However, it is probably not feasible for all school districts to conduct wage matches. Matches require the cooperation of the state employment security agency. Several states do not possess the data and others have legislation and policies preventing them from participating in wage matching. It would be very burdensome and therefore unlikely for state agencies to deal independently with the numerous school districts in their state.

Parent Conferences Are More Cost-Effective Than Other Verification Procedures, But Are Still Highly Ineffective.

Of all verification procedures tested, parent conferences were most cost-effective. However, the parent conferences were often not implemented properly and did not identify very many instances of misreporting.

Use of Error-Prone Profile Makes Detection Procedures More Effective.

Targeting applications for verification using the error-prone profile is more effective in locating errors than random selection. The most effective detection procedures were parent conferences and state wage matches using the error-prone profile. However, even using the error-prone profile, parent conferences were not cost-effective, at least in the short run.

CONCLUSION 4: IMPLEMENTATION PROBLEMS ARE ENCOUNTERED BY SCHOOL DISTRICTS

In pilot sites, even with extensive evaluation contractor training and technical assistance, school districts failed to follow through with full implementation of several detection procedures. Such

compliance problems may be encountered under normal operating conditions. Study findings suggest that this is partly due to the complexity of the quality assurance procedures, requisite followup activities, and built-in administrative disincentives to correctly implement quality assurance procedures.

CONCLUSION 5: COSTS AND OTHER FACTORS ACT AS STRONG DISINCENTIVES FOR SCHOOL DISTRICTS TO IMPLEMENT QUALITY ASSURANCE PROCEDURES

As implemented in the pilot study, all costs for quality assurance were borne by school districts, local and state agencies, and by parents, yet all savings are accrued to the federal government. Further, school districts are typically not structured to carry out quality assurance procedures efficiently and they sometimes do not view it as a role appropriate for educators.

Taken together, these results suggest that deterrence procedures, and in particular an improved application such as the IVPP application, would result in substantial cost savings with the least disturbance to schools and recipients. Because the IVPP application is so effective in reducing costly errors associated with ineligibles receiving benefits (versus eligibles receiving free meals instead of discounted meals), subsequent detection procedures will not be very cost effective. It must be kept in mind, however, that the IVPP application was tested in only one school year, and no information is available on its long-term effectiveness.

In addition to providing more direction to applicants on how to correctly report income, the IVPP application clearly indicated that the application information would be subject to verification. Without subsequent verification and publicity of the results, it is likely that the deterrent effect of the application would diminish. To maintain the deterrent effect of the application, the logical next step would be to implement a limited verification program. Based on study findings, it appears that the use of the error-prone model in conjunction with state wage matching would be the most cost-effective tool. State wage matching was carried out by the evaluation contractor and the study does not provide guidance on feasibility of implementation by school districts. However, there would be costs to the school districts and state agencies involved. Clearly, careful planning and further testing would be warranted before such a program is implemented. Based on study findings, parent conference would be the second choice for a verification method if wage matches are not feasible.

## END NOTES

1/ Households determined through verification to be ineligible for free or reduced-price school meals can elect to pay full price for school meals. Thus when households elect to pay full price, the school district will continue to receive income. However, when the ineligible households completely withdraw from participation in the school meal programs, the school district will suffer an income reduction that makes it more difficult to meet fixed program costs.

2/ In three large school districts that did not use the IVPP application, a 5 percent sample of approved applications was used. Although the design includes control sites, verification was not conducted in these school districts.

3/ The remaining 16 percent of participants subjected to the documentation following application with consistency check were unable to describe single specific problems.

# APPENDIX A

## IVPP APPLICATION AND INSTRUCTIONS TO APPLICANTS REGARDING THE PROVISION OF DOCUMENTATION

REDUCED SIZE--NOT ACTUAL SIZE

# APPLICATION FOR FREE AND REDUCED PRICE SCHOOL MEALS—SCHOOL YEAR 1982-83

PARENT or GUARDIAN: Please complete one application for EACH school your children attend. A complete application must have the names of all household members, the Social Security Numbers of all household members 21 years and older, all household income, and the application must be signed by an adult household member such as a parent. Contact your school if you have foster children and wish to apply for them. Please PRINT neatly. Use a ball point pen or pencil and press firmly—you are making copies. Return ALL completed copies to the school.

1. NAME OF THE SCHOOL THE CHILDREN ATTEND: _____

2. FULL NAME AND GRADE OF EACH CHILD ATTENDING THE SCHOOL YOU PRINTED IN NUMBER 1:

| | LAST NAME | FIRST NAME | GRADE IN SCHOOL | | LAST NAME | FIRST NAME | GRADE IN SCHOOL |
|---|---|---|---|---|---|---|---|
| (A) | | | | (C) | | | |
| (B) | | | | (D) | | | |

3. BEGINNING WITH THE ADULTS IN YOUR HOUSEHOLD, print the full name in column A of ALL related and unrelated persons living in your household. Be sure to include yourself and children listed in Question 2. Print each person's age in column B. Next, in column C print the Social Security Number of each adult person who is 21 years or older. If an adult does not have a Social Security Number, print the word NONE in the space next to that person's name. (The reason why you are being asked to supply Social Security Numbers is printed on the back of this application).

NEXT, print the total amount of income each person was ACTUALLY PAID OR RECEIVED LAST MONTH from each of the sources shown below. If a person received more than one check or cash payment from a source last month, show the total amount. If a person did not receive income from a source or the person was under the age of 15, print the word NONE in the appropriate space. If a person's income last month was not typical, you must print and CIRCLE the estimated average monthly amount that person expects to receive from that source during the year.

| Last and First Name of Household Member (A) | Age (B) | Social Security Number (C) | Earnings From Job(s) (Before Withholding) | Welfare Payments (AFDC) | Social Security (Green or Gold Check) | Child Support and/or Alimony | Unemployment Compensation | Self-Employment Income | All Other Income (See Note) |
|---|---|---|---|---|---|---|---|---|---|
| | | | $ | $ | $ | $ | $ | $ | $ |
| | | | $ | $ | $ | $ | $ | $ | $ |
| | | | $ | $ | $ | $ | $ | $ | $ |
| | | | $ | $ | $ | $ | $ | $ | $ |
| | | | $ | $ | $ | $ | $ | $ | $ |
| | | | $ | $ | $ | $ | $ | $ | $ |
| | | | $ | $ | $ | $ | $ | $ | $ |
| | | | $ | $ | $ | $ | $ | $ | $ |

TOTAL MONTHLY HOUSEHOLD INCOME $ _____

NOTE: (1) Other income includes pensions and retirement pay, disability, strike benefits, or any other cash amount received.
(2) You do not have to include income received by children for occasional or casual jobs such as lawn work or baby-sitting.
(3) If you need to compute a monthly income amount, see instructions on the back of the application.

4. CHECK THE APPROPRIATE BOX: (Your answer is voluntary. Households that receive food stamps can also receive school meals.)

☐ My household does not currently receive food stamps. ☐ My household currently receives food stamps.

5. ADULTS 21 YEARS OR OLDER IN YOUR HOUSEHOLD: READ BOTH STATEMENTS, PLACE AN "X" IN THE BOX TO SHOW THAT YOU UNDERSTAND THE SECOND STATEMENT, AND SIGN THE APPLICATION.

I/We: certify that all the above information is true and correct and all household income has been reported; understand that deliberate misrepresentation of information on the application may subject me/us to prosecution under applicable state and federal statutes; understand that this information is being given in connection with the receipt of federal funds; and understand that school officials may verify the information on the application.

☐ I/We: agree that information previously provided to and contained in Food Stamp Agency, Welfare Agency, or State Employment Agency files may be used to verify the information provided on this application for free or reduced price school meal benefits.

| SIGNATURE OF ADULT HOUSEHOLD MEMBER WHO COMPLETED APPLICATION | SIGNATURE OF OTHER ADULT HOUSEHOLD MEMBER | SIGNATURE OF OTHER ADULT HOUSEHOLD MEMBER | SIGNATURE OF OTHER ADULT HOUSEHOLD MEMBER |
|---|---|---|---|
| | | | |
| DATE: | DATE: | DATE: | DATE: |

6. HOME ADDRESS AND TELEPHONE NUMBER OF THE ADULT HOUSEHOLD MEMBER WHO COMPLETED THE APPLICATION.

HOME ADDRESS: _____

DAY TIME TELEPHONE: _____

**FOR SCHOOL USE ONLY**

A. TOTAL MONTHLY HOUSEHOLD INCOME: (From #3) $ _____

B. TOTAL HOUSEHOLD SIZE: (Total Number of Names From #3) = _____

C. APPROVAL STATUS: ☐ Approved Free Meals ☐ Approved Reduced Price Meals ☐ Denied (Explain Below)

D. DATE PARENTS NOTIFIED: _____ DETERMINING OFFICIAL: _____ DATE: _____

E. REASON FOR DENIAL: _____



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# DOCUMENT PROVING HOUSEHOLD ELIGIBILITY

In order for your application to be considered complete, **YOU ARE REQUIRED TO SUBMIT A COPY OF AT LEAST ONE OFFICIAL DOCUMENT** that confirms or proves the eligibility of your household to receive free or reduced price meal benefits. The instructions below tell you exactly what document you can provide. The document you provide will be kept confidential and will be used to assist in proving your household's eligibility for free or reduced price meal benefits.

1. **IF YOUR HOUSEHOLD RECEIVES FOOD STAMPS:** You can attach **ONE** of the following documents. If you do not want to do this, do 2 or 3 or 4 below.

   - Food Stamp Certification Notice sent to you by the Food Stamp Office, **OR**
   - A letter from the Food Stamp Office stating that you receive Food Stamps.

2. **IF YOU DO NOT DO #1, AND ADULTS IN YOUR HOUSEHOLD ARE EMPLOYED:** You must submit one of the following documents for each employed person.

   - A current paycheck stub, **OR**
   - Pay envelope showing your total gross pay, **OR**
   - A letter from the employer stating your total gross wages, **OR**
   - Self-employed persons must provide copy of a recent sales tax statement, or FICA form, or last quarterly tax estimate.

**OR**

3. **IF YOU DO NOT DO #1 OR #2, AND NO ADULTS IN YOUR HOUSEHOLD ARE EMPLOYED:** You must submit a copy of the document for the largest source of household income.

| IF THE LARGEST SOURCE OF HOUSEHOLD INCOME IS: | YOU MUST PROVIDE: |
|---|---|
| Public assistance (welfare, AFDC) | Your benefit notice from the welfare agency |
| Unemployment compensation | Your notice of eligibility from the State Employment Security Office |
| Social Security | Your SSI eligibility letter or your Social security Retirement benefit letter |
| Alimony or Child Support | A copy of the court decree or agreement |
| Disability or Workman's Compensation | A copy of the disability award letter, or check stub |
| Veteran's Benefits | A copy of the benefit notice from the VA |

**OR**

4. **IF YOU DO NOT DO #1 OR #2 OR #3, AND YOU REPORT NO INCOME ON YOUR APPLICATION:**

   You must attach a brief note explaining in writing how your household pays for food, clothing, and housing, and when you expect to have income.

***Submit Your Document With Your Application***

SELECTED CHARACTERISTICS OF EXPERIMENTAL SCHOOL DISTRICTS

| SCHOOL DISTRICT CHARACTERISTIC | SFA 1 | SFA 2 | SFA 3 | SFA 4 | SFA 5 | SFA 6 | SFA 7 |
|---|---|---|---|---|---|---|---|
| FNS Region | West | West | West | Mid/Atl | Mid/Atl | Mid/Atl | Mid/ Atl |
| Enrollment | 600 | 5,017 | 15,000 | 5,227 | 8,200 | 10,588 | 17,390 |
| Percent of Students Receiving Meal Benefits | 36.1 | 43.5 | 1.5 | 35.2 | 15.2 | 22.6 | 21.9 |
| Number of School Buildings | 3 | 9 | 25 | 21 | 19 | 43 | 49 |
| Where Applications Were Processed | School Building | Central (SFA) | School Building | School Building | School Building | School Building | School Building |
| Where Quality Assurance Procedures Were Conducted | School Building | Central (SFA) | School Building | School Building | School Building | School Building | School Building |
| Number of IVPP Applications Processed | | | | | | | |
| Total Number of IVPP Applications (1) | 216 (NA) | 3,021 (9) | 576 (25) | 524 (21) | 2,162 (19) | 2,761 (43) | 4,498 (49) |
| IVPP Application Only (Quality Assurance Procedure I) | 216 (NA) | 1,632 (4) | 247 (17) | 524 (21) | 1,677 (13) | 1,826 (26) | 2,916 (33) |
| IVPP Application With Documentation (Quality Assurance Procedure II) | NA (NA) | 1,389 (5) | 329 (8) | NA (NA) | 485 (6) | 935 (17) | 1,582 (16) |
| Number of Document Consistency Checks Performed (Quality Assurance Procedure III) | NA (NA) | NA (NA) | (3) (3) | NA (NA) | 9 (3) | 28 (9) | 44 (7) |
| Number of Document After Application With Document Consistency Check Performed (Quality Assurance Procedure IV) | 7 (3) | NA (NA) | (18) (8) | 60 (11) | 37 (6) | 47 (13) | 78 (16) |
| Number of Parent Telephone Conferences Performed (Quality Assurance Procedure V) | NA (NA) | 83 (9) | (22) (13) | 57 (10) | 61 (10) | 66 (21) | 113 (26) |
| Number of Local Third Party Checks Performed (Quality Assurance Procedure VI) | NA (NA) | 81 (9) | (43) (25) | 129 (21) | NA (NA) | 149 (43) | 255 (49) |
| Number of State Third Party Checks Performed (Quality Assurance Procedure VII) | NA (NA) | 81 (9) | 43 (25) | 129 (21) | 105 (19) | 149 (43) | 255 (49) |

(1) Numbers shown in parentheses represent the number of schools involved in each Quality Assurance Procedure.

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## SELECTED CHARACTERISTICS OF EXPERIMENTAL SCHOOL DISTRICTS

| SCHOOL DISTRICT CHARACTERISTIC | SFA 8(2) | SFA 9 | SFA 10 | SFA 11 | SFA 12 | SFA 13 |
|---|---|---|---|---|---|---|
| FNS Region | South/ East | South/ East | South/ East | South/ East | South/ East | South/ West |
| Enrollment | 22,000 | 3,959 | 11,244 | 22,770 | 7,212 | 6,600 |
| Percent of Students Receiving Meal benefits | 26.0 | 47.9 | 54.1 | 33.4 | 34.7 | 60.3 |
| Number of School Buildings | 38 | 12 | 20 | 44 | 13 | 16 |
| Where Applications Were Processed | School Building | School Building | School Building | Central (SFA) | School Building | School Building |
| Where Quality Assurance Procedures Were Processed | NA | School Building | School Building | School Building | School Building | School Building |
| Number of IVPP Applications Processed | | | | | | |
| Total Number of IVPP Applications | 5,950 (38) | 2,540 (12) | 7,814 (20) | 10,608 (44) | 3,109 (13) | 5,366 (16) |
| IVPP Application Only (Quality Assurance Procedure I) | 5,950 (38) | 1,579 (5) | 4,782 (14) | 7,100 (29) | 1,776 (9) | 2,002 (10) |
| IVPP Application With Documentation (Quality Assurance Procedure II) | NA (NA) | 961 (7) | 3,032 (6) | 3,508 (15) | 1,333 (4) | 3,364 (6) |
| Number of Document Consistency Checks Performed (Quality Assurance Procedure III) | NA (NA) | 51 (4) | 57 (3) | 61 (7) | 26 (2) | 34 (3) |
| Number of Document After Application With Document Consistency Check Performed (Quality Assurance Procedure IV) | NA (NA) | NA (NA) | 120 (7) | 176 (14) | 61 (5) | 79 (4) |
| Number of Parent Telephone Conferences Performed (Quality Assurance Procedure V) | NA (NA) | 65 (8) | 172 (10) | 240 (23) | 65 (6) | 112 (9) |
| Number of Local Third Party Checks Performed (Quality Assurance Procedure VI) | NA (NA) | 126 (12) | 385 (20) | 497 (44) | 157 (13) | 212 (16) |
| Number of State Third Party Checks Performed (Quality Assurance Procedure VII) | NA (NA) | 176 (12) | 522 (20) | 736 (44) | 249 (13) | 0 (NA) |

(1) Numbers shown in parentheses represent the number of schools involved in each Quality Assurance Procedure.

(2) This school district was unable to fulfill the Quality Assurance Procedures.

SELECTED CHARACTERISTICS OF EXPERIMENTAL SCHOOL DISTRICTS

| SCHOOL DISTRICT CHARACTERISTIC | SFA 14 | SFA 15 | SFA 16 | SFA 17 | SFA 18 | SFA 19 |
|---|---|---|---|---|---|---|
| FNS Region | South West | North East | North East | North East | Mid West | Mid West |
| Enrollment | 5,700 | 1,649 | 2,686 | 6,305 | 1,336 | 2,859 |
| Percent of Students Receiving Meal Benefits | 11.0 | 31.2 | 30.0 | 2.2 | 20.8 | 4.6 |
| Number of School Buildings | 5 | 5 | 6 | 8 | 5 | 5 |
| Where Applications Were Processed | Central (SFA) | School Building | Schol Building | School Building | Central SFA) | School Building |
| Where Quality Assurance Procedures Were Processed | Central (SFA) | Central (SFA) | School Building | Central (SFA) | Central (SFA) | School Building |
| Number of IVPP Applications Processed | | | | | | |
| Total Number of IVPP Applications | 558 (5) | 1,151 (5) | 940 (6) | 279 (8) | 308 (5) | 135 (5) |
| IVPP Application Only (Quality Assurance Procedure I) | NA (NA) | NA (NA) | 940 (6) | 279 (8) | NA (NA) | 135 (5) |
| IVPP Application With Documentation (Quality Assurance Procedure II) | 558 (5) | 1,151 (5) | NA (NA) | NA (NA) | 308 (5) | NA (NA) |
| Number of Document Consistency Checks Performed (Quality Assurance Procedure III) | 7 (3) | 15 (3) | NA (NA) | NA (NA) | 22 (3) | NA (NA) |
| Number of Document After Application With Document Consistency Check Performed (Quality Assurance Procedure IV) | 15 (3) | NA (NA) | NA (NA) | 6 (4) | NA (NA) | (13) (5) |
| Number of Parent Telephone Conferences Performed (Quality Assurance Procedure V) | 11 (2) | 8 (2) | 51 (6) | 5 (4) | NA (NA) | NA (NA) |
| Number of Local Third Party Checks Performed (Quality Assurance Procedure VI) | NA (NA) | NA (NA) | 56 (6) | NA (NA) | 11 (5) | 13 (5) |
| Number of State Third Party Checks Performed (Quality Assurance Procedure VII) | NA (NA) | NA (NA) | NA (NA) | NA (NA) | 11 (5) | 13 (5) |

(1) Numbers shown in parentheses represent the number of schools involved in each Quality Assurance Procedure.

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SELECTED CHARACTERISTICS OF EXPERIMENTAL SCHOOL DISTRICTS

| SCHOOL DISTRICT CHARACTERISTIC | SFA 20 | SFA 21 | SFA 22 | SFA 23 | SFA 24 | SFA 25 |
|---|---|---|---|---|---|---|
| FNS Region | Mid West | South West | South West | South West | South West | Mid West |
| Enrollment | 660 | 7,550 | 767 | 8,029 | 3,813 | 40,000 |
| Percent of Students Receiving Meal Benefits | 16.5 | 42.9 | 26.7 | 21.6 | 37.9 | 25.6 |
| Number of School Buildings | 2 | 16 | 4 | 15 | 6 | 60 |
| Where Applications Were Processed | School Building | School Building | School Building | School Building | School Building | Central (SFA) |
| Where Quality Assurance Procedures Were Processed | Central (SFA) | School Building | School Building | School Building | School Building | Central (SFA) |
| Number of IVPP Applications Processed | | | | | | |
| Total Number of IVPP Applications | NA (NA) | 3,045 (16) | NA (NA) | 1,664 (15) | 1,318 (6) | NA (NA) |
| IVPP Application Only (Quality Assurance Procedure I) | NA (NA) | 2,189 (11) | NA (NA) | 1,190 (9) | 1,318 (6) | NA (NA) |
| IVPP Application With Documentation (Quality Assurance Procedure II) | NA (NA) | 856 (5) | NA (NA) | 474 (6) | NA (NA) | NA (NA) |
| Number of Document Consistency Checks Performed (Quality Assurance Procedure III) | NA (NA) | 24 (2) | 10 (3) | 10 (2) | NA (NA) | NA (NA) |
| Number of Document After Application With Document Consistency Check Performed (Quality Assurance Procedure IV) | NA (NA) | 85 (6) | NA (NA) | 31 (4) | NA (NA) | 230 (19) |
| Number of Parent Telephone Conferences Performed (Quality Assurance Procedure V) | 15 (2) | 95 (8) | NA (NA) | 55 (9) | 102 (6) | 219 (20) |
| Number of Local Third Party Checks Performed (Quality Assurance Procedure VI) | NA (NA) | 222 (16) | 12 (4) | NA (NA) | 102 (6) | 246 (21) |
| Number of State Third Party Checks Performed (Quality Assurance Procedure VII) | 15 (2) | NA (NA) | NA (NA) | NA (NA) | NA (NA) | NA (NA) |

(1) Numbers shown in parentheses represent the number of schools involved in each Quality Assurance Procedure.



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SELECTED CHARACTERISTICS OF EXPERIMENTAL SCHOOL DISTRICTS

| SCHOOL DISTRICT CHARACTERISTIC | SFA 26 | SFA 27 | SFA 28 | SFA 29 | Total |
|---|---|---|---|---|---|
| FNS Region | Mid West | Mid West | Mid West | Mid West | |
| Enrollment | 51,083 | 70,516 | 7,128 | 41,775 | 379,463 |
| Percent of Students Receiving Meal Benefits | 36.3 | 47.7 | 17.4 | 45.9 | |
| Number of School Buildings | 105 | 123 | 13 | 65 | 755 |
| Where Applications Were Processed | Central (SFA) | School Building | School Building | School Building | |
| Where Quality Assurance Procedures Were Processed | Central (SFA) | School Building | School Building | School & Central | |
| Number of IVPP Applications Processed | | | | | |
| Total Number of IVPP Applications | NA (NA) | NA (NA) | 1,817 (13) | 18,258 (65) | 78,618 (458) |
| IVPP Application Only (Quality Assurance Procedure I) | NA (NA) | NA (NA) | 1,318 (9) | 11,872 (43) | 50,994 (316) |
| IVPP Application With Documentation (Quality Assurance Procedure II) | NA (NA) | NA (NA) | 499 (4) | 6,386 (22) | 27,674 (142) |
| Number of Document Consistency Checks Performed (Quality Assurance Procedure III) | NA (NA) | NA (NA) | 12 (2) | 126 (11) | 539 (70) |
| Number of Document After Application With Document Consistency Check Performed (Quality Assurance Procedure IV) | 511 (39) | 809 (41) | 39 (5) | 273 (21) | 2,695 (234) |
| Number of Parent Telephone Conferences Performed (Quality Assurance Procedure V) | 378 (31) | 479 (41) | 24 (6) | 387 (33) | 2,885 (315) |
| Number of Local Third Party Checks Performed (Quality Assurance Procedure VI) | 601 (35) | 143 (41) | 82 (13) | 312 (65) | 3,833 (473) |
| Number of State Third Party Checks Performed (Quality Assurance Procedure VII) | NA (NA) | NA (NA) | NA (NA) | NA (NA) | 1,933 (267) |

(1) Numbers shown in parentheses represent the number of schools involved in each Quality Assurance Procedure.

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APPENDIX C

## MEASUREMENT OF QUALITY ASSURANCE PROCEDURE COSTS

It is important to note that several factors complicate the cost savings analysis and the calculation of a simple indicator of cost saving. First, costs and savings occur to different governmental units. In the school meal programs, all savings resulting from applicant error reduction accrue to the federal government. Moreover, cost savings for the federal government represent revenue loss for local SFAs. That is, the total reimbursement received by the SFA decreases because there are fewer free and reduced-price meal participants. As a result, when judged strictly from the federal perspective, any quality assurance procedure is likely to be cost-effective because requiring the procedure would involve no costs to the federal government and is likely to result in at least nominal cost savings. Conversely, from the SFA perspective, no procedure could be cost-effective. Any quality control effort is likely to involve additional costs. If the procedure discovers or deters misreporting, the monetary effect on local SFAs would be revenue loss. Therefore, to rely solely on cost savings ratios to evaluate the procedures would be administratively naive. However, careful analysis of the costs and savings allows empirical explication of these issues and can form the foundation of an incentive system that would make free and reduced-price school meal application quality assurance procedures attractive to both the federal government and local SFAs.

Second, there are significant problems in measuring total costs. SFAs do not have recordkeeping systems that permit identification and costs associated with the implementation of quality assurance procedures. An extensive review of the accounting systems used by SFAs concluded that the only reliable measure of costs would be to have school officials maintain records of labor time required to implement the procedures. This information, in turn, was used to estimate a crude measure of average costs of conducting a quality assurance procedure:

$$C_{ij} = \frac{\sum_k t_{ijk} \cdot \bar{P}_{jk}}{n_{ij}} \cdot \frac{A_j}{P_j}$$

where:

$C_{ij}$ = Average cost of implementing procedure i in SFA j

$t_{ijk}$ = Total time staff members in labor category k spend implementing procedure i in SFA j

$P_{jk}$ = Average total compensation received by staff members in labor category k in SFA j

$n_{ij}$ = Number of procedure i implemented in SFA j

$A_j$ = Total administrative costs for SFA j

$P_j$ = Total cost for administrative personnel compensation in SFA j.

The cost measure described above develops an average cost estimate through the use of measures of staff time needed to implement the procedures, number of applications verified, staff compensation rates, and the total administrative costs. The cost measure incorporates nonlabor costs associated with a procedure by multiplying labor costs of a procedure by the ratio of total administrative costs for an SFA over total administrative personnel compensation. This is a common bookkeeping procedure that avoids the necessity of detailed breakdowns of SFA direct and overhead costs. All pilot site SFAs had these data available.

A limitation of the cost measure used is that it measures only average costs and cannot address issues related to marginal costs. Because of administrative overhead and other start-up costs, it is likely that the first year of verification is the most expensive and that the costs associated with conducting verification in subsequent years will progressively decline to a certain minimum. Knowledge of marginal costs would potentially permit estimation of the optimal verification rate where marginal costs equal marginal benefits. At such an optimum, total savings associated with the procedure would be maximized. Because SFA records permitted estimation of only average costs, all cost-effectiveness measures will be implicitly indexed to the 10 percent verification rate used in the pilot sites.

The average cost measure addresses only per verification costs of conducting a procedure; it does not address costs associated with

implementing procedures such as staff training, forms development, technical assistance, and so on. In the Phase II pilot sites, the majority of these costs were borne by the contractor and with few exceptions did not accrue to SFAs. If adopted independently, SFAs would be faced with implementation and development costs not captured in the average cost model. However, such implementation and development costs would occur primarily in the first year of operation and decline as a percentage of total costs in subsequent years.

By focusing solely on SFA administrative costs, the average cost model also does not measure costs to applicants: the time and effort necessary for applicants to comply with quality assurance procedure requirements is not included in the total. Nutritional costs also are not measured. When a student is excluded from participation, there are potential nutritional costs to the student along with associated cost savings to the federal government. The nutritional advantages of the school meal program are not necessarily limited to those participants who are legally eligible. The Phase II design was incapable of measuring these costs. Therefore, measures of cost were necessarily limited to average administrative costs accruing to SFAs associated with operating a quality assurance procedure.

Measurement of costs solely in terms of average SFA administrative expenses could result in a distorted image of the relative cost effectiveness of the procedures. The comparisons of average cost measure are biased by making procedures that shift the burden of verification from SFAs either to parents (as in the documentation requirement) or to other agencies (as in state-level third-party verifications) appear more cost-effective than procedures (such as parent conferences) that place the burden on SFAs.

Finally, the average cost model may not adequately represent the bookkeeping reality of SFAs. Although the model measures the value of administrative resources absorbed in conducting the procedures, it does not necessarily measure total additional administrative costs. In most pilot SFAs, the costs of the procedures were borne by increasing the labor requirements for existing staff and/or cutting back on other staff

activities. In only three SFAs, total paid staff time was increased as a result of the procedures. Forms filled out by school staff attempted to determine whether other activities had suffered as a result of imposition of the procedures. However, a review of forms returned suggested that school personnel are unable to articulate the "opportunity costs" of the procedures.

APPENDIX D

# NONRESPONSE ANALYSIS

This appendix presents the method used to detect nonresponse bias with respect to receipt of excess benefits. The problem addressed is that results of the survey could potentially be biased if households that misreport their income or family size to receive excess benefits have a higher probability of refusing to submit to an in-home audit than households not receiving excess benefits. The potential for refusal bias, however, is relatively small because the survey experienced only a 3.25 percent refusal rate.[1/]

## Notation

R — Index variable of response status; R = Respondent, $\bar{R}$ = Refusal.

B — Index variable of excess benefits; $\bar{B}$ = No excess benefits, B = Excess benefits.

J — Index variable of group membership where groups are constructed to maximize the across group variance of B and minimize the variance within group.

## Statistical Procedures

P(B) is to be estimated. However, because of potential nonresponse bias, $E(P(B|R)) \neq P(B)$. Therefore, P(B) was estimated indirectly by the equation:

$$P(B) = P(B|\bar{R})P(\bar{R}) + P(B|R)P(R), \qquad (1)$$

where P(R) and $P(\bar{R})$ are the observed response rates for the survey and $P(B|\bar{R})$ is to be estimated.

A weighted-least-squares stepwise discriminate function procedure was employed to divide the survey respondents into 'J' groups, which maximize across group variance on excess benefits on the basis of application variables. The 'J' groups were constructed by assigning a value 'Q' to each household sampled based on error-prone profile (EPP) score, presence

or absence of reported wage income, and presence or absence of reported welfare income.

The sample was divided into 10 groups (J) based on intervals of Q. We make the assumption that:

$$P(R|B,J) = P(R|B) \tag{2}$$

and

$$P(R|\bar{B},J) = P(R|\bar{B}). \tag{3}$$

That is, the relation of R and B is constant across categories of J.

Because B and $\bar{B}$ are mutually exclusive and exhaustive categories:

$$P(B|J) = 1 - P(\bar{B}|J) \tag{4}$$

and therefore,

$$1 = \frac{1 - P(\bar{B}|J)}{P(\bar{B}|J)} . \tag{5}$$

Multiplying both sides by $P(R|\bar{B})/P(R|B)$ results in:

$$P(R|\bar{B})/P(R|B) = \frac{P(R|B) - P(R|\bar{B}) \times P(\bar{B}|J)}{P(R|B) \times P(B|J)} , \tag{6}$$

from Assumption 3:

$$P(R|\bar{B}) \times P(\bar{B}|J) = P(R\bar{B}|J) \text{ and}$$

$$P(R|B) \times P(B|J) = P(RB|J). \tag{7}$$

Substituting these values into Equation 6 obtains:

$$P(R|\bar{B})/P(R|B) = \frac{P(R|B) - P(R\bar{B}|J)}{P(RB|J)} . \tag{8}$$

Solving for P(RB|J):

$$P(RB|J) = P(R|B) - \frac{P(R|B)}{P(R|\bar{B})} P(R\bar{B}|J) . \tag{9}$$

Thus, there is a linear relationship between $P(R\bar{B} \mid j)$ and $P(RB \mid j)$ that is a function of $P(R|B)$ and $P(R|\bar{B})$. This relationship can be expressed in standard notation:

$$R(RB|j) = \alpha + \beta(R\bar{B}|j), \tag{10}$$

where:

$$\alpha = P(R|B)$$

$$\beta = -\frac{P(R|B)}{P(R|\bar{B})} .$$

$\alpha$ and $\beta$ was estimated using OLS methods and assumptions:

$$y_j = a + bx_j + e, \tag{11}$$

where:

$y_j$ is $P(RB|j)$ and

$x_j$ is $P(R\bar{B}|j)$.

The obtained values of a and b were used to obtain estimates of $P(R|B)$ and $P(R|\bar{B})$ from Equation 9:

$$\hat{P}(R|B) = a \tag{12}$$

$$\hat{P}(R|\bar{B}) = -\frac{a}{b} .$$

The analysis revealed no strong, consistent, or statistically significant refusal bias. In fact, households with low EPP scores (indicating a low probability of receipt of excess benefits) were slightly more likely to refuse an interview than households with medium or high EPP scores. We conclude from this analysis there is no evidence of response bias in the in-home audit data.

## END NOTES

1/ Refusals are defined as households selected for in-home audits who refused to participate in an interview. There were 83 such refusals. Households that could not be located because they had moved from the areas where the in-home audits were conducted were not considered refusals.